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QUESTION 1
Which mechanism does GET VPN use to preserve IP header information?

A. IPsec tunnel mode
B. GRE
C. MPLS
D. IPsec transport mode

Answer: A

QUESTION 2
Refer to the exhibit. Which routes are advertised by the router?

```
!
router bgp 65500
  neighbor LocalSite ebgp-multihop 2
  neighbor LocalSite update-source Loopback 0
  neighbor LocalSite next-hop-self
  neighbor LocalSite route-map CheckCommunity in
  neighbor LocalSite route-map CPodPeer out
!
route-map CPodPeer permit 10
  match as-path 1
!
route-map CPodPeer permit 15
  match as-path 33
!
route-map CpodPeer deny 30
!
ip as-path access-list 1 permit ^$
ip as-path access-list 33 permit _65006$
!
```

A. No routers
B. BGP routes that originated from AS 65006 and BGP routes that originated on this router
C. All routers
D. BGP routers sourced on this router
E. BGP routes that originated on RT1

Answer: B

QUESTION 3
For what reason might you choose to use an SVTI interface instead of a crypto map on a tunnel interface?

A. SVTIs support dynamic routing protocols without GRE headers.
B. SVTIs can support multiple IPSec SAs.
C. SVTIs can carry non-IP traffic.
D. SVTIs support CEF-switched traffic shaping.

Answer: A

QUESTION 4
Refer to the exhibit. Which two statements about the output are true? (Choose two)

```
RT1#sh bfd neighbors detail
IPv4 Sessions
NeighAddr
10.129.95.197                      LD/RD        RH/RS     State     Int
                                1/2148270086    Up        Up        Gi0/3
Session state is UP and not using echo function.
Session Host: Software
OurAddr: 10.129.95.198
Handle: 1
Local Diag: 0, Demand mode: 0, Poll bit: 0
MinTxInt: 999000, MinRxInt: 999000, Multiplier: 3
Received MinRxInt: 999000, Received Multiplier: 3
Holddown (hits): 2691(0), Hello (hits): 999(2143414)
Rx Count: 2049145, Rx Interval (ms) min/max/avg: 816/1016/917 last: 306 ms ago
Tx Count: 2143416, Tx Interval (ms)  min/max/avg: 4/1266/878 last: 476 ms ago
Elapsed time watermarks: 0 0 (last: 0)
Registered protocols: BGP
Uptime: 3w0d
Last packet: Version: 1- Diagnostic: 0
             State bit: Up
             Poll bit: 0              - Demand bit: 0
             C bit: 1                 - Final bit: 0
             Multiplier: 3           - Length: 24
             My Discr.: 2148270086    - Your Discr.: 1
             Min tx interval: 999000  - Min rx interval: 999000
             Min Echo interval: 0
```

A. BFD last failed 476ms ago on interface GigabitEthernet 0/3.
B. BGP on RT1 has negotiated the BFD capability with its peer.
C. BFD is active on interface GigabitEthernet0/3 and is using ICMP.
D. BFD is active on interface GigabitEthernet0/3 and is using UDP.
E. BFD is active for BGP on RT1

Answer: DE

QUESTION 5
Which two statements about PPP PAP are true? (Choose two)

A. It requires two-way authentication.
B. It can protect against playback attacks.
C. It is supported only on synchronous interfaces.
D. It is vulnerable to trial-and error attacks.
E. Login attempts are controlled by the remote node.

Answer: DE

QUESTION 6
In a simple MPLS L3VPN, which two tasks are performed by the PE router? (Choose two.)

A. It establishes pseudo wires with other PEs.
B. It exchanges VPNv4 and VPNv6 routes with CE Devices.
C. It assigns labels to routes in individual VPNs.
D. It forwards labeled packets to CE devices.
E. It exchanges VPNv4 or VPNv6 route with other PE routers.

Answer: CE

QUESTION 7
What are the two BFD modes? (Choose two)

A. active
B. asynchronous
C. passive
D. established
E. demand
F. synchronous

Answer: BE

QUESTION 8
Which statement about the default QoS configuration on a Cisco switch is true?

A. All traffic is sent through four egress queues.
B. Port trust is enabled.
C. The Port Cos value is 0.
D. The Cos value of each tagged packet is modified.

Answer: C

QUESTION 9
Which two statements about IPv4 and IPv6 networks are true? (Choose two.)

A. In IPv6, hosts perform fragmentation.
B. IPv6 uses a UDP checksum to verify packet integrity.
C. In IPv6, routers perform fragmentation.
D. In IPv4, fragmentation is performed by the source of the packet.
E. IPv4 uses an optional checksum at the transport layer.
F. IPv6 uses a required checksum at the network layer.

Answer: AB
Explanation:
https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k_r4-
3/addr_serv/configuration/guide/b_ipaddr_cg43xa9k/b_ipaddr_cg42a9k_chapter_01000.pdf

QUESTION 10
Refer to the exhibit. If R1 generated this response to the show debug command, which statement about its debug its debug output is true?

```
R1#show debug
Condition 1: interface Fa0/0 (1 flags triggered)
        Flags: Fa0/0
Condition 2: ip 192.168.12.1 (0 flags triggered)
Condition 3: username cisco (0 flags triggered)
```

A. After interface Fa0/0 becomes active, the router is allowed to generate debug output.
B. When debug output is generated, only the user cisco is permitted to view it.
C. R1 generates debug output as soon as IP address 192.168.0.0 is applied to interface Fa0/0.
D. R1 generates debug output as soon as all three conditions are met.

Answer: A

QUESTION 11
Which two EtherChannel modes can create an LACP EtherChannel ?

A. on
B. active
C. passive
D. auto
E. desirable

Answer: BC

QUESTION 12
Which command can you enter to disable logging for terminal lines?

A. no logging trap
B. no logging monitor
C. no logging buffer
D. no logging console
E. no logging count

Answer: B

QUESTION 13
Which two options are purposes of MSDP SA filtering? (Choose two.)

A. to allow the filtering of PIM messages between peers
B. to allow all SA message to be processed by MSDP peers
C. to improve the scalability of an MSDP multicast environment
D. to reduce the number of multicast address that are shared to MSDP peers
E. to allow the filtering of IGMP messages between peers
F. to reduce the number of multicast address that are distributed to other devices in the same multicast domain

Answer: CD

QUESTION 14
Which options is the default LACP load-balancing algorithm for IP traffic on Layer 3?

A. the source and destinnation IP port
B. the destination IP port
C. the source and destination IP address
D. the destination Porte
E. the source IP port

Answer: C

QUESTION 15
Refer to the exhibit. Which network script automation option or tool is used in the exhibit?

```
from socket import socket

def get_config(device, username, password):
    my_socket = socket()
    .....
```

A. EEM
B. Python
C. Bash script
D. NETCONF
E. REST

Answer: B

QUESTION 16
Refer to the exhibit. Which two effects of this configuration are true? (Choose two.)

```
Switch(config)# mls qos srr-queue input priority-queue 2 bandwidth 0
Switch(config)# mls qos srr-queue input bandwidth 4 2
```

A. The priority queue is disabled.
B. Queue 1 is allocated 4 percent of the available bandwidth and queue 2 is allocated 2 percent of the available bandwidth.
C. Queue 1 is a priority queue that is allocated 1/3 of the available bandwidth.
D. Queue 1 is served twice as fast as queue 2.
E. Queue 1 is a priority queue that is allocated 2/3 of the available bandwidth.
F. Queue 2 is served twice as fast sa queue 1.

Answer: AD

QUESTION 17

Which three statements are true about the spanning-tree loop guard feature? (Choose three)

A. Loop guard affects UplinkFast operation.
B. Loop guard can be enabled on PortFast ports.
C. Loop guard operation is not affected by the spanning-tree timers.
D. Loop guard must be enabled on point-to-point link only.
E. Loop guard cannot be enabled on a switch that also has root guard enabled.
F. Loop guard can detect a unidirectional link in the same way as UDLD.

Answer: CDE

QUESTION 18
Refer to the exhibit. Which statement about the 192.168.100.0/24 destination network is true?

```
R1#sh ip eigrp top all
IP-EIGRP Topology Table for AS(100)/ID(192.168.13.1)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status
P 192.168.100.0/24, 1 successors, FD is 409600, serno 5
         via 192.168.13.3 (409600/128256), FastEthernet0/1
         via 192.168.12.2 (435200/409600), FastEthernet0/0
```

A. The Reported Distance for the Successor is 128256.
B. The metric installed into the route table is 435200.
C. he metric installed into the route table is 128256.
D. The Reported Distance for the Feasible Successor is 409600.

Answer: A

QUESTION 19
Which statement about STP port states is true?

A. A port in the blocking state remains in that state for 30 seconds before transitioning to the listening state.
B. Listening and learing are transtory port states that use the forward delay timer.
C. When a port transitions to the learning state, it can send and receive data frames.
D. A port in the blocking state learns address and receives BPDUs.

Answer: B

QUESTION 20
Which two statements are true about an EVPL? (Choose two.)

A. It has a high degree of transparency.
B. It does not allow for service multiplexing.
C. The EVPL service is also referred to as E-line.
D. It is a point-to-point Ethernet connection between a pair of UNIs.

Answer: CD

QUESTION 21
Which OpenStack component implements role-based access control?

A. Horizon
B. Nova
C. Neutron
D. Keystone

Answer: D

QUESTION 22
Refer to the exhibit. R2 is configured as the R1 neighbor in area 51, but R2 fails to receive the configured summary route.
Which action can you take to correct the problem?

```
R1
interface Loopback0
    ip address 10.1.1.1 255.255.255.0
    ip ospf 1 area 0
    ip ospf network point-to-point
interface GigabitEtheriet0/0
    ip address 192.168.252.1 255.255.255.252
    ip ospf 1 area 0
interface GigabitEthernet1/0
    ip address 172.16.252.1 255.255.255.252
    ip ospf 1 area 51
router ospf 1
    router-id 10.1.1.1
    summary-address 192.168.0.0 255.255.0.0
```

A. Replace the summary-address command with the area-range command.
B. Configure a summary address under R1interface GigabitEthernet0/0.
C. Configure a summary address under R1 interface GigabitEthernet1/0.
D. Configure the no discard-route command in the OSPF process of R1.
E. Configure ip ospf network broadcast under the Loopback0 interface of R1.

Answer: A

QUESTION 23
Which two conditions must be met before IS-IS Level 1 routers will become adjacent?(Choose two.)

A. The routers must share a common Autonomous System Number.

B. The router must share a common process ID.
C. The router must be in different areas.
D. The routers must share a common network segment.
E. The routers must be configured with the neighbor command.
F. The routers must be in the same area.

Answer: DF

QUESTION 24
Which two statements are true about control plane policing? (Choose two.)

A. Control plane policing will affect only traffic that is destined to the route processor.
B. Access lists that are used in policies for control plane policing must not use the log keyword.
C. Access lists that use the deny rule in control plane policing do not progress to the next class.
D. The log keyword can be used but the log-input keyword must not be used in policing.

Answer: AB

QUESTION 25
Which three pieces of information are carried on OSPF type 3 LSAs? (Choose three)

A. metric
B. authentication type
C. link state
D. IP subnet
E. external route tag
F. subnet mask

Answer: ACF

QUESTION 26
Your NetFlow collector is not working due to a large amount of traffic entering your network which
is destined to a single IP address.
Which NetFlow feature allows you to collect the top source hosts for this traffic on the local
router?

A. NetFlow can export flows only to a extermal flow collector
B. show ip cache flow
C. ip accounting
D. ip flow-top-talkers
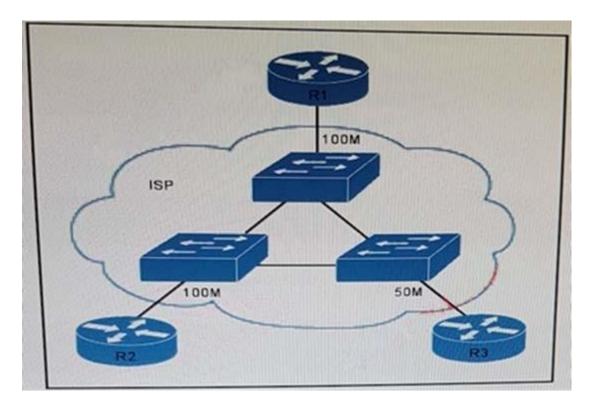
Answer: D

QUESTION 27
Refer to the exhibit. R1, R2 and R3 are in different satelite offices of the same prganization.
A multicast video source is located behind R1.R3 frequently receives video streams intend for R2.
These streams saturate the available bandwidth of R3.
Which configuration change can alleviate the congestion on R3?

A. Configure R3 to send an immediate-leave message when necessary to stop receiving unwanted traffic.
B. Configure IGMP snooping on R1, R2, and R3.
C. Place a PIM filter on the switches and interfaces that connect to R1, R2, and R3.
D. Enable IGMP snooping on all switches that connect to R1, R2, and R3.
E. Place a PIM filter on the switch and interface that connect to R1 only.

Answer: D

QUESTION 28
With which protocol is CoAP designed to be used?

A. TCP
B. SNMP
C. UDP
D. XMPP

Answer: C

QUESTION 29
Which two solutions can reduce UDP latency? (Choose two.)

A. fast retransmission
B. fast recovery
C. low-latency queuing
D. IP service level agreements
E. congestion-avoidance algorithm

Answer: CD
Explanation:
In the actual exam, if becomes single choice question just choose C.

QUESTION 30
Which three statements describe the characteristics of a VPLS architecture? (Choose three.)

A. It forwards Ethernet frames.
B. It maps MAC address destinations to IP next hops
C. It supports MAC address aging.
D. It replicates broadcast and multicast frames to multiple ports.
E. It conveys MAC address reachability information in a separate control protocol.
F. It can suppress the flooding of traffic.

Answer: ACD

QUESTION 31
Which command address learning on the configures port security on a switch to enable permanent MAC interface?

A. switchport port-security mac-address-learning enable
B. switchport port-security mac-address timer 0
C. switchport port-security mac-address sticky
D. switchport port-security mac-address maximum 1 sticky
E. switchport port-security mac-address permanent

Answer: C

QUESTION 32
Refer to the exhibit. Which two statements can this output verify? (Choose two)

A. The device will wait 200 ms before retransmitting an EIGRP packet.
B. The device must receive an EIGRP packet within 24 seconds to maintain a neighbor relationship.
C. The EIGRP neighbor has been up for 28 seconds.
D. The device must receive an EIGRP packet within 28 seconds to maintain a neighbor relatio nship.
E. The device will tear down and restart its EIGRP process in 24 seconds.
F. The EIGRP neighbor has been up for 28 ms.

Answer: AC

QUESTION 33
Which option describes the purpose of the as-set argument of the aggregate-address command?

```
router bgp 64496
    no synchronization
    bgp log-neighbor-changes
    aggregate-address 10.0.0.0 255.0.0.0 as-set summary-only
    neighbor 192.168.1.2 remote-as 64497
    neighbor 192.168.2.2 remote-as 64498
    neighbor 192.168.3.2 remote-as 64499
    no auto-summary
```

A. It provides an AS path in the aggregate advertisement that contains only the local AS number.
B. It provides a predefined AS path in the aggregate advertisement that is used to indicate an aggregate prefix.
C. It provides an AS path in the aggregate advertisement that includes the AS numbers of the component members.
D. It provides a list of AS numbers top which the aggregate is advertised.

Answer: C

QUESTION 34
Refer to the exhibit. The route-map wan2site is being used for redistributing BGP routes into the eigrp 28 process.
Which option best describes the resulting redistribution of routes?

```
router eigrp 28
network 172.28.100.0 0.0.0.255
redistribute bgp 64999 route-map wan2site
passive-interface default
 no passive-interface GigabitEthernet0/0/0.4

RT1>show route-map wan2site
route-map wan2site, deny, sequence 5
   Match clauses:
   Set clauses:
   Policy routing matches: 0 packets, 0 bytes
route-map wan2site, permit, sequence 10
   Match clauses:
     ip address (access-lists): default-only
   Set clauses:
     metric 100000 8 1 1 1
     tag 42
   Policy routing matches: 0 packets, 0 bytes

RT1>show access-list default-only
Standard IP access list default-only
     10 permit 0.0.0.0
```

A. policy routing matches 0 packets means that there are no matches and no routes are being

redistributed
B. all routes are being redistributed with a metric and a tag
C. The deny sequence 5 is preventing any routes from and a tag
D. a default routes is being redistributed with a metric and a tag

Answer: C

QUESTION 35
Which two features are incompatible with Loop Guard on a port? (Choose two.)

A. Root Guard
B. PortFast
C. UplinkFast
D. BackboneFast
E. BPDU skew detection

Answer: AB

QUESTION 36
Refer to the exhibit. Which statement about the R1 multicast network environment is true?


```
R1# show ip rpf 10.30.30.32
RPF information for ? (10.30.30.32)
    RPF interface: Ethernet 1/0
    RPF neighbor: ? (10.1.1.32)
    RPF route/mask: 10.30.30.32/32
    RPF type: unicast (ospf 100)
    Doing distance-preferred lookups across tables
    RPF topology: ipv4 multicast base, originated from ipv4 unicast data

R1# show ip rpf 10.1.108.10
RPF information for ? (10.1.108.10)
    RPF interface: Tunnel10
    RPF neighbor: ? (10.1.15.1)
    RPF route/mask: 0.0.0.0/0
    RPF type: multicast (static)
    Doing distance-preferred lookups across tables
    RPF topology: ipv4 multicast base
```

A. RPF builds the topology using the unicast data for source address 10.1.108.10.
B. A static mroute configured to point multicast traffic for 10.30.30.32 through Ethernet 1/0.
C. RPF uses the OSPF 100 table for source address 10.1.108.10.
D. The default mroute uses Tunnel 10 as the exit interface for 10.1.108.10.
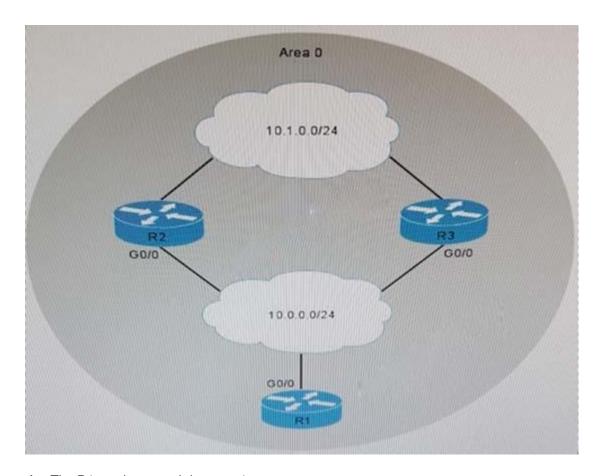
Answer: D

QUESTION 37
Refer to the exhibit. R1 has an OSPF path to R2 and R3 for 10.1.0.0/24, but R1 has a routing entry for 10.1.0.0/24 from only one router at a time.
Which option is the most likely cause?

A. The R1 maximum-path is set to 1.
B. R2 has a higher administrative distance.
C. R2 is using a filter list.
D. R2 is using an offset-list.

Answer: A

QUESTION 38
Refer to the exhibit. The router sets local-preference to which option when it receives a BGProute
with a comminty string 1000:130 from a neighbor in the LocalSite peer-group?

```
router bgp 65500
  neighbor LocalSite peer-group
  neighbor LocalSite ebgp-multihop 2
  neighbor LocalSite update - source Loopback0
  neighbor LocalSite next-hop-self
  neighbor LocalSite route-map CheckCommunity in
  neighbor LocalSite route-map CPodPeer out
!
route-map CheckCouuuunity permit 8
 match community 8
 set local-preference 80
!
route-map CheckCouuuunity permit 10
 match community 1
 set local-preference 110
!
route-map CheckCouuuunity permit 30
!
ip community-list 1 permit 1000:100
ip community-list 3 permit 1000:130
ip community-list 8 permit 1000:80
```

A. 80
B. 110
C. 130
D. no setting
E. the default value

Answer: E

QUESTION 39
Refer to the exhibit. Which routes are advertised by the router?

```
BGP as-path filters
!
router bgp 65500
  neighbor LocalSite peer-group
  neighbor LocalSite password 7 13579ACE45580A12
  neighbor LocalSite ebgp-multihop 2
  neighbor LocalSite update-source Loopback0
  neighbor LocalSite next-hop-self
  neighbor LocalSite route-map CheckCommunity in
  neighbor LocalSite route-map CPodPeer out
!
route-map CPodPeer permit 10
  match as-path 1
!
route-map CPodPeer permit 15
  match as-path 33
!
route-map CPodPeer deny 20
!
ip as-path access-list 1 permit ^$
ip as-path access-list 33 permit _65006_
!
end
```

A. No routers
B. All routers
C. BGP routes from AS 65006 and BGP routes sourced on this router
D. BGP routers sourced on this router
E. BGP routes from AS 65006

Answer: C

QUESTION 40
You are configuring CoS-to-DSCP mappings with three requirements:

```
- COS 1 must be translated into AF13.
- COS 2 must be translated into AF22.
- COS 5 must be translated into EF.
```

Which configuration command can you use to implement the requirements?

A. mis qos map cos-dscp 0 10 18 24 32 46 48 56
B. mis qos map cos-dscp 0 12 18 24 32 46 48 56
C. mis qos map cos-dscp 0 14 20 24 32 46 48 56
D. mis qos map cos-dscp 0 12 18 24 32 40 46 56

Answer: C

QUESTION 41
Which three of the following security controls would you take into consideration when implementing IoT capabities? (Choose three.)

A. Layered Security Appoach.
B. Place security above functionality.
C. Define lifecycle controls for IoT devices.
D. Privacy impact Assessment.
E. Change passwords every 90 days.
F. Implement Intrusion Detection Systems on IoT devices.

Answer: ADE

QUESTION 42
Which EIGRP feature allows the use of leak maps?
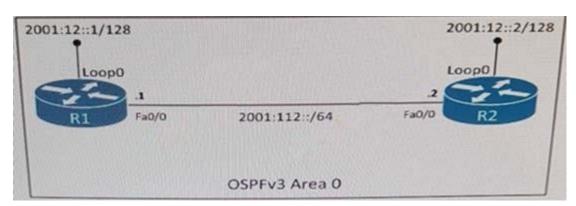
A. offset-list
B. neighbor
C. address-family
D. stub

Answer: D

QUESTION 43
Refer to the exhibit. Which IPv6 OSPF network type is applied to interface Fa0/0 of R2 by default?

A. broadcast
B. Ethernet
C. multipoint
D. point-to-point

Answer: A

QUESTION 44
Which option describes the characteristics of a public Infrastructure as a Serveice cloud service model?

A. It is a way of delivering cloud-computing infrastructure (servers, storage, network, and operating systems) as an on-demand service.
B. It is a cloud service where the underlying hardware is managed by the cloud service provider.

C. It is a cloud-computing platform that facilitates the creation of web applications without the need to maintain the supporting software applications.
D. It is a cloud-computing platform that facilitates the creation of web applications without the need to maintain the supporting software operating systems.

Answer: A

QUESTION 45
Which effect of configuring the passive-interface S0/0 command under the EIGRP routing process is true?

A. It prevents EIGRP neighbor relationships from being formed over interface S0/0.
B. It configures interface S0/0 to send hello packets with the passive-interface bit set.
C. It configures interface S0/0 to suppress all outgoing routing updates.
D. It configures interface S0/0 to reject all incoming routing updates.

Answer: A

QUESTION 46
What is the default IS-IS interface metric on a Cisco router?

A. 255
B. 64
C. 10
D. 128

Answer: C

QUESTION 47
Which two items must be defined to capture packet data with the Embedded Packet Capture feature? (Choose two.)

A. the capture rate
B. the capture point
C. the capture buffer
D. the buffer memory size
E. the capture filter
F. the capture file export location

Answer: BE

QUESTION 48
When you configure an IPv6 IPsec tunnel, which two fields can represent the ISAKMP identity of a peer? (Choose two)

A. Authentication method
B. DH group identifier
C. Hostname
D. IPv6 address

E. Encryption algorithm

Answer: CD

QUESTION 49
Which action enables passive interfaces in RIPv6(RIPng)?

A. Use "passive-interface default" under the routing process.
B. Enable passive-interface on interface configuration.
C. passive interface are not supported in RIPng.
D. Enable passive-interface for each interface under the routing process.

Answer: C

QUESTION 50
Which statement is true about IGMP?

A. Multicast sources send IGMP messages to their first-hop router, which then generates a PIM join message that is then sent to the RP.
B. Multicast receivers send IGMP messages to their first-hop router, which then forwards the IGMP messages to the RP.
C. IGMP messages are encapsulated in PIM register messages and sent to the RP.
D. Multicast receivers send IGMP messages to signal their interest to receive traffic for specific multicast groups.

Answer: D

QUESTION 51
Which two Cisco Express Forwarding tables are located in the data plane? (Choose two.)

A. the label forwarding information base
B. the forwarding information base
C. the label information table
D. the IP routing table
E. the adjacency table

Answer: BE
Explanation:
http://www.cisco.com/c/en/us/td/docs/ios/12_2/switch/configuration/guide/fswtch_c/xcfcef.html

QUESTION 52
What does the DIS on a LAN periodically transmit in multicast to ensure that the IS-IS link-state database is accurate?

A. ISH
B. CSNP
C. IIH
D. PSNP
E. LIP

Answer: B

QUESTION 53
Which two statements about DMVPN with NHRP are true? (Choose two)

A. NHRP shortens the configuration of the hub router.
B. NHRP dynamically provides information about the spoke routers to the hub.
C. NHRP disables multicast
D. The hub router uses NHRP to initiate the GRE tunnel with spokes.
E. The spoke routers act as the NHRP servers.

Answer: AB

QUESTION 54
Refer to the exhibit. Which two options are effects of this configuration when the router is unable to reach the TACACS+ server? (Choose two.)

```
username cisco1 password cisco2
enable secret cisco3
aaa new-model
aaa authentication login default group tacacs+ none
line vty 0 4
    transport input all
```

A. Users cannot log in ti the router
B. Users can log in to the router EXEC mode without entering a password.
C. Users can log in to the router user EXEC mode with the username cisco1 and the password cisco2.
D. Users can log in to the router privileged EXEC mode with the username cisco1 and the password cisco2.
E. Users can log in to the router privileged EXEC mode without entering a password.
F. Users can log in to the router privileged EXEC mode without a username and with the password cisco3.

Answer: BF

QUESTION 55
Refer to the exhibit. Which configuration must you apply to a router so that it can generate a log message in the given format?

```
R2#sh version | i uptime
R2 uptime is 3 hours, 55 minutes
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#^Z
R2#
03:55:23: %SYS-5-CONFIG_I: Configured from console by console
```

A. service sequence-numbers
B. service timestamps log datetime
C. service timestamps log uptime
D. service alignment logging

Answer: C

QUESTION 56
Refer to the exhibit. When traffic marked as CoS 5 arrives on the switch, what DSCP value does the switch apply?


```
mls qos map cos-dscp 0 0 16 24 40 32 46 48
```

A. 0
B. 32
C. 40
D. 46
E. 48

Answer: B

QUESTION 57
Which feature provides local database policy options that are similar to those of TACACS+ and RADIUS servers?

A. authentication fallback
B. reflexive ACLs
C. AAA attributes
D. 802.1x

Answer: D

QUESTION 58

Which two statements about IGMP are true?(Choose two.)

A. IGMPv2 supports explicit source signaling.
B. IGMPv3 is the first version of IGMP to support a basic query-response mechanism.
C. IGMPv2 supports IGMP querier election.
D. IGMPv1 supports group-specific queries.
E. IGMPv3 uses 224.0.0.22 as destination address for reports.

Answer: CE

QUESTION 59
Refer to the exhibit. How is voice traffic entering this router on interface GigabitEthernet0/0 being handled by the shown marking policy?

```
interface GigabitEthernet0/0
 description *** Site Backbone ***
 ip address 10.1.114.5 255.255.255.248
 service-policy input marking
!
policy-map marking
 class in-voice
 class in-streaming
   set ip dscp af41
  class in-time-sensitive
   set ip dscp af31
 class class-default
   set ip dscp af21
 !
class-map match-any in-streaming
 match access-group name streaming
 match access-group name tp-rooms
 class-map match-any in-voice
 match access-group name voice
 class-map match-any in-time-sensitive
 match access-group name time-sensitive
 !
ip access-list extended voice
 deny    ip any any fragments
 permit udp any 10.192.0.0 0.15.255.255
 permit udp 10.192.0.0 0.15.255.255 any
 permit udp any any range 51100 51140
 permit udp any range 51100 51140 any
 permit udp any range 17384 17484 any range 17384 17484
```

A. Any traffic matching access-list voice is trusted and marking is not changed.
B. All voice is being set to DSCP 0
C. All voice is being set to AF21
D. Any traffic matching access-list voice is set to EF

Answer: A

QUESTION 60
Refer to the exhibit. After you configure the given IP SLA on a Cisco router, you note that the device is unable to fialover to the backup route even when pings to 10.12.34.5 fail.

What action can you take to correct the problem?

```
ip sla 12
    icmp-echo 10.12.34.5
    timeout 2000
    frequency 2
ip sla schedule 12 life forever start-time now
track 12 ip sla 12 state
ip route 0.0.0.0 0.0.0.0 10.12.34.5 track 12
ip route 0.0.0.0 0.0.0.0 192.168.1.153 200
```

A. Change the ip route 0.0.0.0 0.0.0.0 192.168.1.153 200 command to ip route 0.0.0.0 0.0.0.0 192.168.1.153 12.
B. Change the ip sla schedule 12 life forever start-time now command to ip sla schedule 12 life forever start-time 00:12:00.
C. Change the track 12 ip sla 12 state command to track 12 ip sla 12 reachability.
D. Change the frequency 2 command to frequency 12.

Answer: C

QUESTION 61
Which IPv6 migration method relies on dynamic tunnels that use the 2002::/16 reserved address space?

A. 6RD
B. 6to4
C. ISATAP
D. GRE

Answer: B

QUESTION 62
Which keychain cryptographic algorithm is supported by the IS-IS routing protocol?

A. HMAC-SHA1-20
B. HMAC-SHA1-12
C. HMAC-MD5
D. MD5

Answer: C

QUESTION 63
What feature can a device use to identify other members of the same IPv6 multicast group on a network segment?

A. MLD
B. MSDP
C. source-specific multicast
D. rendezvous points

Answer: A

QUESTION 64
Which two statement about the EIGRP Over the Top feature are true?(Choose two.)

A. EIGRP routers traffic between the PE devices.
B. Traffic is LISP-encapsulated on the control plan
C. The neighbor command must be configured with LISP encapsulation on wach CE devic
D. The network statement must be configured on each PE device to connect separate EIGRP sites.
E. The network statement must be configured on each CE device to connect separate EIGRP sites.
F. Traffic is LISP-encapsulated on the data plan

Answer: CF

QUESTION 65
Which marking field is used only as an internal marking within a router?

A. QOS Group
B. Discard Eligiblity
C. IP Precedence
D. MPLS Experimental

Answer: A

QUESTION 66
Which two statements about IANA-reserved addresses are true?(Choose two.)

A. The prefix FF9::/32 is reserved for source-specific multicast on IPv6.
B. The address range 239.0.0.0/8 is reserved for source-specific multicast on IPv4.
C. The address range 232.0.0.0/8 is reserved for source-specific multicast on IPv4.
D. The prefix FF3x::/32 is reserved for source-specific multicast on IPv6.
E. The address range 225.0.0.0/8 is reserved for source-specific multicast on IPv4.
F. The prefix FF00::/32 is reserved for source-specific multicast on IPv6.

Answer: CD

QUESTION 67
Refer to the exhibit. Which configuration must you apply to a router so that it can generate a log message in this format?

```
00023: *Jan   3  01:45:35.895  UTC:  %SYS-5-CONFIG_I: Configured from
console by console
```

A. service timestamps log datetime localtime show-timezoneservice sequence-numbers
B. service timestamps log datetime msec localtimeservice sequence-numbers
C. service timestamps log datetime msec localtime show-timezoneservice alignment logging
D. service timestamps log datetime msec localtime show-timezoneservice linenumber
E. service timestamps log datetime msec localtime show-timezoneservice sequence-numbers

Answer: E

QUESTION 68
Which two commands should you enter to enable IP Source Guard with IP and MAC address filtering? (Choose two)

A. ip verify source tracking
B. switch port port-security
C. ip verify unicast source
D. ip verify source
E. ip verify source port-security

Answer: AE

QUESTION 69
Which two statements about IP source guard are true? (Choose two.)

A. It must be applied to EtherChannel port members.
B. It is available only on L2 ports.
C. It is supported in software only.
D. It is not supported on private VLANS.
E. It blocks DHCP packets.

Answer: BD

QUESTION 70
Which two statements about IS-IS neighbor adjacencies are true?(Choose two.)

A. Each device must have the same 6-type system ID.
B. Neighboring devices must have the same level.
C. If the ignore-mtu command is configured on both devices, the devices can have different MTU settings.
D. Each device's 4-type router ID must be unique.
E. Level 1 devices must be in the same area.

Answer: BE
Explanation:
An IS-IS router establishes separate adjacencies with its neighbors running on the same level.
Level 1 adjacencies are created only between routers with the same area identifier.8 G,

QUESTION 71
Refer to the exhibit, while reviewing a log file on a router with this NTP configuration, you note that the log entries of the router display a different time than the NTP time.

```
clock timezone EST -5
clock summer-time EDT recurring
service timestamps debug datetime
service timestamps log datetime
logging buffered 5000 debugging
ntp clock-period 17179272
ntp server 10.181.23.23
```

Which action can you take to correct the problem?

A. add the local time keyword to the service timestamps log datetime statement.
B. add the msec keyword to the service time stamps log datetime statement
C. add the statement ntp broadcast to the ntp configuration of the neighboring router
D. configure the router to be the NTP master
E. Remove the datetime keyword from the service time stamps log datetime statement.

Answer: A

QUESTION 72
What command can you enter to enable client auto configuration over an ISATAP tunnel?

A. tunnel mode ipv6ip isatap
B. no ipv6 nd ra suppress
C. ipv6 nd ra suppress
D. tunnel mode ipv6ip 6rd

Answer: B

QUESTION 73
Refer to the exhibit. After you apply the given configurations to R1 and R2, which networks does R2 advertise to R1?

```
R1
interface FastEthernet0/0
    ip address 192.168.12.1 255.255.255.0

router rip
    version 2
    network 192.168.12.0


R2
interface FastEthernet0/0
    ip address 192.168.12.2 255.255.255.0
    ip summary-address rip 172.16.32.0 255.255.240.0

interface FastEthernet0/1
    ip address 172.16.33.2 255.255.255.0

router rip
    version 2
    network 172.16.0.0
    network 192.168.12.0
```

A. both 172.16.32.0/20 and 172.16.33.0/24
B. 172.16.32.0/20 only
C. 172.16.0.0/16 only
D. 172.16.33.0/24 only

Answer: C

QUESTION 74
Which command can you enter on a device so that unsolicited log messages appear on the console after solicited log messages?

A. logging bufferd 4096
B. no logging console
C. ogging synchronous
D. service timestamps log uptime

Answer: C

QUESTION 75
Refer to the exhibit. What are two effects of the given configuration? (Choose two)

```
interface Loopback0
        ip address 172.1.1.1 255.255.255.255
        ip pim dense-mode
interface FastEthernet0/0
        ip address 192.168.12.1 255.255.255.0
        ip pim dense-mode
interface FastEthernet0/1
        ip address 192.168.14.1 255.255.255.0
        ip pim dense-mode

ip pim bidir-enableip pim send-rp-announce Loopback0 scope 5 group-list 1 bidir
ip pim send-rp-discovery scope 5

access-list 1 deny   224.1.1.1
access-list 1 permit 239.0.0.0 0.255.255.255
```

A. Source for the 224.1.1.1 multicast stream will register with 172.1.1.1.
B. It configures 172.1.1.1 as a spare-mode rendezvous point.
C. Multicast stream 224.1.1.1 will operate in spare mode.
D. It configures 172.1.1.1 as the Bidir-PIM rendezvous point.
E. Multicast stream 224.1.1.1 will operate in dense mode.
F. Sources for the 239.1.1.1 multicast stream will register with 172.1.1.1.

Answer: DF

QUESTION 76
Refer to the exhibit. R1 is unable to ping the device at 10.3.3.3. Which two options are possible reasons for the problem? (Choose two.)

```
R1#ping 10.3.3.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.3.3.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)

R1#sh run | sec ip route
ip route 10.3.3.3 255.255.255.255 FastEthernet0/0

R1#sh arp
Protocol  Address          Age (min)  Hardware Addr   Type   Interface
Internet  10.3.3.3            0       Incomplete      ARPA
Internet  192.168.12.1       -        c001.2314.0000  ARPA   FastEthernet0/0
Internet  192.168.12.2       4        c002.24f0.0000  ARPA   FastEthernet0/0

R1#debug arp
ARP packet debugging is on
*Mar  1 00:07:52.851: IP ARP: sent req src 192.168.12.1 c001.2314.0000,
                      dst 10.3.3.3 0000.0000.0000 FastEthernet0/0.
*Mar  1 00:07:54.851: IP ARP: sent req src 192.168.12.1 c001.2314.0000,
                      dst 10.3.3.3 0000.0000.0000 FastEthernet0/0.
*Mar  1 00:07:56.851: IP ARP: sent req src 192.168.12.1 c001.2314.0000,
                      dst 10.3.3.3 0000.0000.0000 FastEthernet0/0.
```

A. The static route is configured as a host route.
B. The static route points to a broadcast interface without a next-hop.
C. IP CEF is disabled on the local router.
D. Proxy ARP is disabled on the next-hop router.
E. The dynamic routing protocol configuration is missing.
F. IP CEF is disabled on the remote router.

Answer: BD

QUESTION 77
Which circumstance can cause interface overruns?

A. microbursts
B. asymmetric routing
C. out-of-order packets
D. fragmentation

Answer: A

QUESTION 78
Which two options are benefits of Metro Ethernet?(Choose two.)

A. It supports CHAP authentication.
B. It inclodes a comprehensive framing mechanism.
C. It integrates seamlessly throughout the enterprise.
D. It can negate link parameters such as frame speed.
E. It provides lower cost per-port than other WAN technologies.

Answer: CE

QUESTION 79
Which statement about Control Plane Policing is true?

A. It queues egress packets that would otherwise be discarde
B. It applies to packets that are generated locally.
C. It queues ingress packets that would otherwise be discarde
D. It applies to packets that are punted to the route processor.

Answer: D
Explanation:
CoPP applies to all packets that punt to the route processor for handling.
http://www.cisco.com/c/en/us/about/security-center/copp-best-practices.html

QUESTION 80
Which statement about Type-4 LSA in OSPFv2 is true?

A. It is present only in the backbone area.
B. It is generated by each ABR and forwarded in non-stub areas.

C. It is forwarded in NSSA areas.
D. It is generated by the ASBR and forwarded throughout the whole OSPF domain.

Answer: B

QUESTION 81
Which option describes a difference between Ansible and Puppet?

A. Ansible is client-server based, and Puppet is not.
B. Ansible requires an agent, and Puppet does not.
C. Ansible is Python based, and Puppet is Ruby based.
D. Ansible autonates repetitive tasks, and Puppet allows you to run plain ssh command.

Answer: C

QUESTION 82
Which two improvements do SIA-Query and SIA-Reply messages add to EIGRP? (Choose two.)

A. Stuck-in-active conditions are solved faster.
B. They prevent a route from going into the stuck-in-active state.
C. They help in the localization of the real failure in the network.
D. The EIGRP adjacency between two neighbors never goes down.

Answer: AC

QUESTION 83
Which two statements are true about an EPL? (Choose two.)

A. It is a point-to-point Ethernet connection between a pair of NNIs.
B. It allows for service multiplexing.
C. It has a high degree of transparency.
D. The EPL service is also referred to as E-line.

Answer: CD

QUESTION 84
Which statement about NAT64 is true?

A. It uses one-to-one mapping between IPv6 addresses and IPv4 addresses.
B. It requires static address mapping between IPv6 addresses and IPv4 addresses.
C. It can be used to translate an IPv6 network to another IPv6 network.
D. It can be configured for stateless and stateful translation.

Answer: D

QUESTION 85
Which three elements compose a network entity title? (Choose three.)

A. area ID
B. domain ID
C. system ID
D. NSAP selector
E. MAC address
F. IP address

Answer: ACD

QUESTION 86
What technology allows a PE router to exchange VPNv4 routes with other PE routers?

A. MPLS L3VPN
B. MPLS L2VPN
C. VPLS
D. Frame Relay to ATM AAL5 Interworking

Answer: A

QUESTION 87
Refer to the exhibit. If R1 contacts the RADIUS server but is unable to find the user name in the server database, how will R1 respond?

```
R1
 aaa authentication login default group radius group tacacs+ local
```

A. It will attempt to contact the TACACS+ server
B. It will prompt the user to enter a new username
C. It will attempt to authenticate the user against the local database
D. It will deny the user access

Answer: D

QUESTION 88
Which two statements about SNMP are true?(Choose two.)

A. SNMPv3 uses the SHA encryption algonthm to provide authorization.
B. SNMPv2c can provide authentication as well as encryption.
C. SNMPv3 uses the 3DES encryption algonthm to provide data privacy.
D. The SNMP agent is responsible for collecting data from the MIB.
E. The SNMP manager is responsible for collecting data from the MIB.
F. SNMPv2c supports only 32-bit counters.

Answer: CE

QUESTION 89
Refer to the exhibit. Which EEM script can you apply to the device so that logged-in users are recorded in syslog messages?

```
*Jan  1 23:33:49: %LINK-5-CHANGE: Interface Ethernet1/0,changed state
to administratively down
```

A.
```
event manager applet INTF-SHUTDOWN
  event syslog pattern "^Interface Ethernet1/0.*administratively down.*"
  action 1.0 cli command "enable"
  action 2.0 cli command "config t"
  action 3.0 cli command "interface Ethernet1/0"
  action 4.0 cli command "no shutdown"
  action 5.0 cli command "end"
  action 6.0 cli command "who"
  action 7.0 syslog msg "$_cli_result"
```

B.
```
event manager applet INTF-SHUTDOWN
  event syslog pattern "Interface Ethernet1/0 administratively down.*"
  action 1.0 cli command "enable"
  action 2.0 cli command "config t"
  action 3.0 cli command "interface Ethernet1/0"
  action 4.0 cli command "no shutdown"
  action 5.0 cli command "end"
  action 6.0 cli command "who"
  action 7.0 syslog msg "_cli_result"
```

C.
```
event manager applet INTF-SHUTDOWN
  event syslog pattern ".*Interface Ethernet1/0.*administratively down.*"
  action 1.0 cli command "enable"
  action 2.0 cli command "config t"
  action 3.0 cli command "interface Ethernet1/0"
  action 4.0 cli command "no shutdown"
  action 5.0 cli command "end"
  action 6.0 cli command "who"
  action 7.0 syslog msg "$_cli_result"
```

D.
```
event manager applet INTF-SHUTDOWN
  event syslog pattern ".*Interface Ethernet1/0.*administratively down.*"
  action 1.0 cli command "enable"
  action 2.0 cli command "config t"
  action 3.0 cli command "interface Ethernet1/0"
  action 4.0 cli command "no shutdown"
  action 5.0 cli command "end"
  action 6.0 cli command "who"
  action 7.0 syslog msg "_cli_result"
```

Answer: C

QUESTION 90

Which two protocols are used by the management plane?(Choose two.)

A. OSPF
B. ISSU
C. FTP
D. BGP
E. Telnet
F. DTP

Answer: CE

QUESTION 91
What are three of the key fields that define a unique NetFlow flow?(Choose two.)

A. Canonical Format Identifier
B. Cyclic Redundancy Check
C. Type of service
D. Source MAC address
E. Input logical interface
F. Layer 3 protocol type

Answer: CEF
Explanation:
IP Packet attributes used by NetFlow:
• IP source address
• IP destination address
• Source port
• Destination port
• Layer 3 protocol type
• Class of Service
• Router or switch interface

QUESTION 92
Refer to the exhibit. Which additional configuration statement is required on R3 in order to allow multicast traffic sourced from 192.168.13.3 to flow along the shared-tree?

```
R3#show ip route

Gateway of last resort is not set

O    192.168.12.0/24 [110/20] via 192.168.23.2, 00:07:27, FastEthernet
C    192.168.13.0/24 is directly connected, Tunnel0
O    192.168.14.0/24 [110/30] via 192.168.23.2, 00:07:27, FastEthernet
     10.0.0.0/32 is subnetted, 2 subnets
C        10.3.3.3 is directly connected, Loopback0
O        10.4.4.4 [110/31] via 192.168.23.2, 00:07:27, FastEthernet0/0
C    192.168.23.0/24 is directly connected, FastEthernet0/0

R3#show ip mroute

(*, 239.1.1.1), 00:01:31/stopped, RP 10.4.4.4, flags: SPF
    Incoming interface: FastEthernet0/0, RPF nbr 192.168.23.2
    Outgoing interface list: Null

(10.3.3.3, 239.1.1.1), 00:00:40/00:02:55, flags: FT
    Incoming interface: Loopback0, RPF nbr 0.0.0.0, Registering
    Outgoing interface list:
        FastEthernet0/0, Forward/Sparse, 00:00:39/00:02:50
```

A. ip route 192.168.14.0 255.255.255.0 Tunnel 0
B. ip route 10.4.4.4 255.255255.255 Tunnel 0
C. ip mroute 10.4.4.4 255.255.255.255 Tunnel 0
D. ip mroute 192.168.14.0 255.255.255.0 Tunnel 0

Answer: C

QUESTION 93
You are implementing new addressing with EIGRP routing and must use secondary addresses, which are missing from the routing table.
Which action is the most efficient solution to the problem?

A. Disable split-horizon on the interfaces with secondary addresses.
B. Disable split-horizon inside the EIGRP process on the router with the secondary interface addresses.
C. Add additional router interfaces and move the secondary addresses to the new interfaces.
D. Use a different routing protocol and redistribute the routes between EIGRP and the new protocol.

Answer: A

QUESTION 94
Which two statements about the command distance bgp 90 60 120 are true? (Choose two.)

A. Implementing the command is a Cisco best practice.
B. The external distance it sets is preferred over the internal distance.
C. The internal distance it sets is preferred over the external distance.
D. The local distance it sets may conflict with the EIGRP administrative distance.

E. The internal distance it sets may conflict with the EIGRP administrative distance.
F. The local distance it sets may conflict with the RIP administrative distance.

Answer: CF

QUESTION 95
Refer to the exhibit. Which statement describes how a router with this configuration treats packets if the devices at 172.16.12.5 and 192.168.3.2 are unreachable?

```
interface Ethernet 0/0
    ip policy route-map PBR
route-map PBR
    match ip address 144
    set ip next-hop 172.16.12.5
    set ip next-hop recursive 192.168.3.2
```

A. It routes the packet based on the packet's destination using the route table
B. It routers the packet into a loop and drops it when the TTL reaches zero.
C. It drop the packet immediately.
D. It sends an ICMP source quench message.

Answer: A

QUESTION 96
What is the default behavior for a manual summary route when a component route of the summary disappears?

A. Regardless of the metric if the componnent route, the metric of the summary is unchanged in order to keep stability.
B. If the component route previously had the best composite metric, the same summary metric is retained for stability.
C. If the component route previously had the best composite metric, the metric of the summary changes to the next-best composite metric.
D. if the component route previously did not have the best composite metric, the summary metric is updated, and updates are sent to peers.

Answer: C

QUESTION 97
Which feature can you implement to reduce global synchronization?

A. WRED
B. marking
C. policing
D. NBAR

Answer: A

QUESTION 98
What are the two variants of NTPv4? (Choose two.)
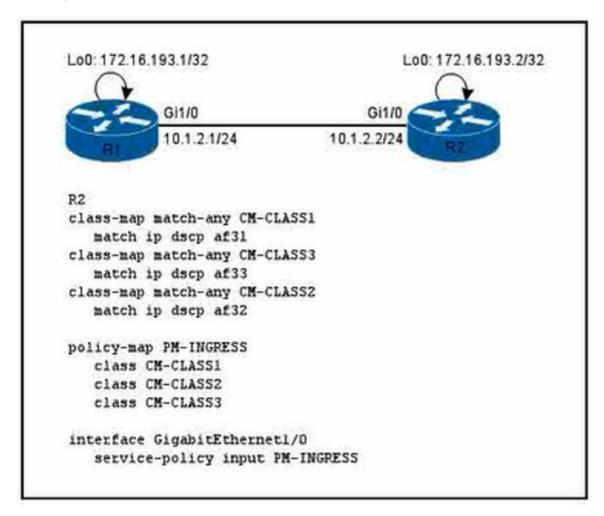
A. client/server
B. broadcast
C. multicast
D. asymmetric
E. unicast

Answer: AB

QUESTION 99
Refer to the exhibit. If router R1 sends traffic marked with IP precedence 3 to R2's Loopback 0 address, which class would the traffic match on R2's Gi1/0 interface?


```
Lo0: 172.16.193.1/32                    Lo0: 172.16.193.2/32


            Gi1/0                  Gi1/0
            10.1.2.1/24            10.1.2.2/24
    R1                                      R2


R2
class-map match-any CM-CLASS1
    match ip dscp af31
class-map match-any CM-CLASS3
    match ip dscp af33
class-map match-any CM-CLASS2
    match ip dscp af32

policy-map PM-INGRESS
    class CM-CLASS1
    class CM-CLASS2
    class CM-CLASS3

interface GigabitEthernet1/0
    service-policy input PM-INGRESS
```

A. CM-CLASS-3
B. class-default

C. CM-CLASS-2
D. CM-CLASS-1

Answer: B

QUESTION 100
Which cache aggregation scheme is supported by NetFlow ToS-based router aggregation?

A. prefix-port
B. AS
C. protocol port
D. destination prefix

Answer: A

QUESTION 101
Which IPv4 feature prevents multicast joins on a per-port basis?

A. MLD filtering
B. IGMP filtering
C. IGMP snooping
D. PIM snooping

Answer: B

QUESTION 102
Refer to the exhibit. What is the PHB class on this flow?

```
R101#show ip cache verbose flow
[...]
SrcIf           SrcIPaddress    DstIf           DstIPaddress    Pr TOS Flgs  Pkts
Port Msk AS                     Port Msk AS     NextHop            B/Pk  Active
Et0/0           10.0.0.1        Et1/0*          14.0.0.2        01 80  10       1
0000 /0  0                      0800 /0  0      0.0.0.0               100     0.0
```

A. none
B. CS4
C. EF
D. AF21

Answer: B

QUESTION 103
Refer to the exhibit. Which statement describes what the authoritative flag indicates?

```
R1#show ip nhrp detail
10.10.10.2/32 via 10.10.10.2, Tunnel0 created 00:16:59, expire 00:00:30
    Type: dynamic, Flags: authoritative unique registered used
    NBMA address: 192.168.2.2
10.10.10.3/32 via 10.10.10.3, Tunnel0 created 00:11:34, expire 00:00:55
    Type: dynamic, Flags: authoritative unique registered used
    NBMA address: 192.168.3.3
```

A. The registration request had the same flag set.
B. Authentication was used for the mapping.
C. R1 learned about the NHRP mapping from a registration request.
D. Duplicate mapping in the NHRP cache is prevented.

Answer: C

QUESTION 104
Which statement is true when using a VLAN ID from the extended ULAN range (1006- 4094)?

A. STP is disabled by default on extended-range VLANs.
B. VLANs in the extended VLAN range can only be used as private VLANs.
C. VLANs in the extended VLAN range cannot be pruned.
D. VLANs in the extended VLAN range can be used with VTPV2 in either client or server mode.

Answer: C

QUESTION 105
Which trunking configuration between two Cisco switches can cause a security risk?

A. configuring incorrect channel-groups on the switches
B. configuring different trunk modes on the switches
C. disabling DTP on the trunk ports
D. configuring different native VLANs on the switches
E. configuring mismatched VLANs on the trunk

Answer: D

QUESTION 106
Refer to the exhibit. With BGP always-compare-med enabled, which BGP entry is installed in the RIB?

```
entry1: AS(PATH) 400, med 150, external, rid 2.2.2.2
entry2: AS(PATH) 100, med 200, external, rid 1.1.1.1
entry3: AS(PATH) 400, med 100, internal, rid 3.3.3.3
```

A. Entry 1 because it was installed first (oldest) in the BGP table.

B. Entry 1 because it has the best MED of the external routes.
C. Entry 2 because it has the lowest router ID.
D. Entry 3 because it has the lowest MED.

Answer: D

QUESTION 107
Refer to the exhibit. What type of IS-IS is configured on R1?


```
R1
interface Loopback0
    ip address 172.16.1.1 255.255.255.255
    ip router isis
    ipv6 address 2001:DB8:1111::1/128
    ipv6 router isis

interface FastEthernet0/0
    ip address 192.168.10.1 255.255.255.0
    ip router isis
    ipv6 address 2001:DB8:10::1/48
    ipv6 router isis

router isis
    net 01.0001.0000.0000.0001.00
```

A. VRF-aware IS-IS
B. IS-IS version 2
C. single-topology IS-IS
D. mufti-process IS-IS

Answer: C

QUESTION 108
Which statement about Cisco StackWise technology is true?

A. All switches in a stack share configuration and routing information to behave as a single unit
B. Removing switches can affect stack performance
C. Only the master switch acts as a forwarding processor
D. Every switch in a stack has its own independent and uncoordinated configuration file, which enables it to become the stack master if the previous master fails

Answer: A
Explanation:
Configuration and routing information is shared by every switch in the stack, creating a single switching unit.
http://www.cisco.com/c/en/us/products/collateral/switches/catalyst-3750-series-

switches/prod_white_paper09186a00801b096a.html

QUESTION 109
Refer to the exhibit. Which two statements are true regarding prefix 10.1.0.0/24? (Choose two.)

```
MC#sh pfr master traffic-class

OER Prefix Statistics:
 Pas - Passive, Act - Active, S - Short term, L - Long term, Dly - Delay (ms),
 P - Percentage below threshold, Jit - Jitter (ms),
 MOS - Mean Opinion Score
 Los - Packet Loss (packets-per-million), Un - Unreachable (flows-per-million),
 E - Egress, I - Ingress, Bw - Bandwidth (kbps), N - Not applioable
 U - unknown, * - uncontrolled, + - control more specific, @ - active probe all
 # - Prefix monitor mode is Special, & - Blackholed Prefix
 % - Force Next-Hop, ^ - Prefix is denied

DstPrefix           Appl_ID Dscp Prot    SrcPort     DstPort SrcPrefix
        Flags               State   Time            CurrBR  CurrI/F Protocol
        PasLDly PasLDly  PasSUn   PasLUn  PasSLos  PasLLos     EBw      IBw
        ActSDly ActLDly  ActSUn   ActLUn  ActSJit  ActPMOS ActSLos  ActLLos
------------------------------------------------------------------------------
10.1.0.0/24              N    N   N          N          N N
                         INPOLICY*   @83         10.4.5.4 Et0/1         U
         52       52       0       0       0       0      67       7
         51       51       0       0       N       N       N       N
```

A. The prefix is in policy, and Cisco PfR rerouted the traffic via 10.4.5.3 Et0/1 because of an OOP event.
B. Cisco PfR is monitoring the prefix via passive NetFlow mode only.
C. Cisco PfR is monitoring the prefix via active, fast, or active throughput IP SLA probe mode only.
D. The prefix is in policy, and Cisco PfR did not reroute the traffic via 10.4.5.3 Et0/1 because the traffic was previously in policy.
E. Cisco PfR is monitoring the prefix via mode monitor, which provides both NetFlow and IP SLA measurements.

Answer: DE

QUESTION 110
Which feature can mitigate hung management sessions?

A. Control Plane Policing
B. the service tcp-keepalives-in and service tcp-keepalives-out command
C. the service tcp-small servers command
D. vty line ACLs

Answer: B

QUESTION 111
What are two requirements for BFD static route support? (Choose two)

A. CEF must be configured on all routers that will carry traffic.
B. BFD must be configured on all Ethernet, virtual-template, and dialer interfaces that will carry traffic.

C. All routers that will carry traffic must have the same software version.
D. All routers that will carry traffic must be the same model.
E. Parameters must be configured on all routers that will carry traffic.
F. Parameters must be configured on all interfaces that will carry traffic.

Answer: AF

QUESTION 112
Refer to the exhibit. Which two actions can you take to allow the network 172.29.224.0/24 to be reachable from peer 192.168.250.53? (Choose two)

```
R1

ip community-list 10 permit 64512:100 64512:200 645212:41650 64513:1220

route-map INTERNET-OUT permit 10
    match community 10

router bgp 64512
    no synchronization
    neighbor INTERNET peer-group
    neighbor INTERNET remote-as 64513
    neighbor INTERNET password c1sC0
    neighbor 192.168.250.53 peer-group INTERNET

address-family ipv4
    no synchronization
    neighbor INTERNET send-community both
    neighbor INTERNET route-map INTERNET-OUT out

R1#show bgp 172.29.224.0

BGP routing table entry for 172.29.224.0/24, version 607252621
Paths:  (1 available, best #1, table default)
Multipath: eBGP 1BGP
    Advertised to update-groups:
    3             4             7
    53739
        10.10.153.12 from 10.10.153.120 (10.10.153.12)
            Origin IGP, metric 0, localpref 130, valid, external, best
            Community:  64512:555  64513:200  64513:53090  64512:64002  64513:64090
```

A. Modify the community list to match communities 64513:69040 attached to 172.29.224.0/24.
B. Configure soft reconfiguration to peering 192.168.250.53.
C. Modify the outbound route map to permit all additional routes.
D. Configure additional address families to peering 192.168.250.53.
E. Modify the inbound route map to permit all additional routes
F. Modify the community list to match community 64513:64090 attached to 172.29.224.0/24.

Answer: CF

QUESTION 113
Which two options are potential impacts of microbursts? (Choose two.)

A. unnecessary broadcast traffic

B. asmmetric routing
C. tail drops
D. invaild checksum errors
E. packet loss
F. inicast flooding

Answer: CE

QUESTION 114
Refer to the exhibit. Which two conclusions can you draw from this command and its output?
(Choose two.)


```
R10#ping mpls ipv4 192.168.40.171/32

Type escape sequence to abort.
QQQQQ
Success rate is 0 percent (0/5)
```

A. R10 has a missing label binding for 192.168.40.171/32
B. The MPLS ping failed.
C. 192.168.40.171/32 exists in the global routing table.
D. A valid LSP exists, and it matches the corresponding MPLS FEC.
E. The MPLS ping was successful.
F. R10 has valid label bingding for 192.168.40.171/32

Answer: AB

QUESTION 115
Which DHCP message type does the DHCP server send to a client to confirm its allocated IP
address?

A. DHCPACK
B. DHCPOFFER
C. DHCPDISCOVER
D. DHCPREQUEST

Answer: A

QUESTION 116
Which statement about a Cisco APIC controller versus a more traditional SDN controler is true?

A. APIC uses a policy agent to translate policies into instructions.
B. APIC supports OpFlex as a Northbound protocol.
C. APIC does support a Southbound REST API

D. APIC uses an imperative model

Answer: A

QUESTION 117
Which attribute is not part of the BGP extended community when a PE creates a VPN-IPv4 route while running OSPF between PE-CE?

A. OSPF domain identifier
B. OSPF route type
C. OSPF router ID
D. MED
E. OSPF network type

Answer: E

QUESTION 118
Refer to the exhibit. R1 and R2 have been configured as BGP neighbor, but their session is stuck in active.
Which action can you take that will enable a session to be established?

```
R1#show ip bgp summary
BGP router identifier 10.1.1.1, local AS number 65530
BGP table version is 1, main routing table version 1

Neighbor        V     AS  MsgRcvd  MsgSent   TblVer  InQ  OutQ  Up/Down    State/PfxRcd
10.1.12.2       4   65530      11       11        0    0     0  00:08:00   Active

R1#show ip route | in 10.1.12.0
C       10.1.12.0/24 is directly connected, FastEthernet0/0

R1#show run | section router bgp
router bgp 65530
   no synchronization
   bgp router-id 10.1.1.1
   bgp log-neighbor-changes
   neighbor 10.1.12.2 remote-as 65530
   neighbor 10.1.12.2 update-source Loopback0
   no auto-summary


R2#show ip bgp summary
BGP router identifier 10.2.2.2, local AS number 65530
BGP table version is 1, main routing table version 1

Neighbor        V     AS  MsgRcvd  MsgSent   TblVer  InQ  OutQ  Up/Down    State/PfxRcd
10.1.12.1       4   65530      11       89        0    0     0  00:41:39   Active
```

A. Enable synchronization on R1 and R2.
B. Issue the neighbor 10.1.12.2 active conmand on R1.
C. Configure 10.1.12.1 as the BGP router ID on R1
D. Configure a neighbor relationship with Loopback0 address of R1 on R2.

Answer: D

QUESTION 119
Refer to the exhibit. Which two statements about the device configuration are true? (Choose two.)

```
Router# show management-interface

Management interface GigabitEthernet 0/1

        Protocol        Packets processed
        Ssh             983
        Snrnp           1275
```

A. The device has control-plane protection enabled.
B. The device implicitly allows Telnet connections.
C. The GigabitEthernet0/1 interface of the device allows incoming SSH and SNMP connections.
D. The device has management-plane protection enabled.
E. The device allows SSH connections to its loopback interface.

Answer: CD

QUESTION 120
How is a targeted LDP session different from a standard LDP session?
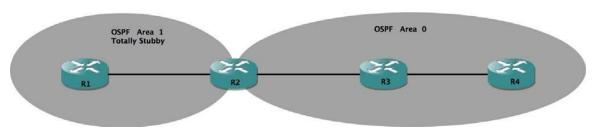
A. Targeted LDP is used only for neighbors on different segments.
B. Targeted LDP requires SDP to be enabled.
C. Targeted LDP requires RSVP to be enabled.
D. Targeted LDP uses unicast hello messages to peer with other devices.

Answer: D

QUESTION 121
Refer to the exhibit. If the default-information originate always command is configured on R4, what route type is assigned to the default route in R1's route table?

A. O
B. E2
C. O IA
D. E1

Answer: C

QUESTION 122
Refer to the exhibit. The spokes of the DMVPN with the given configuration are having QoS issues.
Which two actions can you take to resolve the problem? (Choose two.)

```
crypto isakmp policy 1
    authentication pre-share
crypto isakmp key dmvpn address 0.0.0.0 0.0.0.0
crypto ipsec transform-set vpntrans ah-sha-hmac esp-aes 256 esp-sha-hmac
crypto ipsec profile DMVPN-PROF
    set transform-set vpntrans

policy-map SHAPE
    class class-default
        shape average 200000

interface Loopback0
    ip address 10.1.1.1 255.255.255.0

interface Tunnel0
    ip address 192.168.1.1 255.255.255.0
    no ip next-hop-self eigrp 1
    ip nhrp authentication dmvpn
    ip nhrp map multicast dynamic
    ip nhrp network-id 99
    ip tcp adjust-mss 1360
    no ip split-horizon eigrp 1
    tunnel source Serial1/0
    tunnel mode gre multipoint
    tunnel protection ipsec profile DMVPN-PROF

interface Serial1/0
    ip address 172.16.1.1 255.255.255.248
    encapsulation frame-relay
frame-relay inverse-arp

router eigrp 1
    network 10.0.0.0
    network 192.168.1.0
```

A. Configure qos pre-classify on the tunnel interface.
B. Configure an NHRP group on the tunnel interface and associate it to a QoS policy.
C. Modify the configuration of the IPsec policy to accept QoS policies.
D. Manually configure a QoS policy on the serial interface.
E. Configure the bandwidth statement on the tunnel interface.
F. Configure the bandwidth statement on the serial interface.

Answer: AB

QUESTION 123
Which command can you enter to prevent a router from displaying Telnet connection messages on the terminal?

A. service telnet-zeroldle
B. ip telnet hidden hostname
C. ip telnet hidden address
D. no ip domain-lookup

E. ip telnet quiet

Answer: E

QUESTION 124
Which description of Infrastructure as a Service is true?

A. a cloud service that delivers on-demand Internet connection between sites
B. a cloud service that delivers on-demand intranet connection between sites
C. a cloud service that delivers on-demand software services on a subscription basis
D. a cloud service that delivers on-demand resources like networking and storage

Answer: D

QUESTION 125
Which two statements about VSS are true? (Choose two.)

A. It requires physical switches to be collocated.
B. It is dependent on spanning-tree.
C. It requires three IP addresses per ULAN.
D. Each VSS has a single management IP address
E. It can eliminate the need for HSRP.

Answer: DE

QUESTION 126
For which reason can two OSPF neighbor routers on the same LAN segment be stuck in the two-way state?

A. The two routers have different MTUs on the interface.
B. The two routers are configured with different priorities.
C. The interface priority is set to zero on both routers.
D. Both routers have the same OSPF router ID.

Answer: C

QUESTION 127
Which option is an example of SaaS?

A. Google Apps
B. Amazon AWS
C. Google App Engine
D. Microsoft Azure

Answer: A

QUESTION 128
How does an IPv6 host automatically generate a global address?

A. It prepends its interface identifier to the network prefixes contained in Router Advertisement messages.
B. It appends its interface identifier to the network prefixes contained in Router Advertisement messages.
C. It appends its interface identifier to the network prefixes contained in Router Solicitation messages.
D. It prepends its interface identifier to the network prefixes contained in Router Solicitation messages.

Answer: B

QUESTION 129
Which statement about the feasible distance in EIGRP is true?

A. It is the maximum metric that should feasibly be considered for installation in the RIB.
B. It is the smallest metric toward the destination encountered ...time the destination went from Active tp Passive state.
C. It is the metric that is supplied by the best next hop toward the destination.
D. It is the maximum metric possible based on the maximum hop count that is allowed.

Answer: B
Explanation:
FD is a record of the lowest known distance since the last transition from the Active to Passive state.

QUESTION 130
Refer to the exhibit. What tag will be applied to the 172.16.130.0/24 route?

```
ip prefix-list cciel seq 5 permit 172.16.0.0/17 le 24
ip prefix-list ccie2 seq 5 permit 172.16.128.0/17 le 24
ip prefix-list ccie3 seq 5 permit 172.17.128.0/17 le 24

route-map ccie permit 10
    match ip address prefix-list cciel
    set tag 10
route-map ccie permit 20
    match ip address prefix-list ccie2
    set tag 20
route-map ccie permit 30
    match ip address prefix-list ccie3
    set tag 30
route-map ccie permit 40
    set tag 40
```

A. 10
B. 20
C. 30
D. 40

Answer: B

QUESTION 131
What is wrong with the configuration of this tunnel interface?

```
interface tunnel 1
 tunnel source ethernet 0
 tunnel mode ipv6ip isatap
 ipv6 address 2001:DB8::/64 eui-64
```

A. ISATAP tunnels cannot use the EUI-64 address format.
B. No tunnel destination has been specified.
C. The tunnel source of an ISATAP tunnel must always point to a loopback interface.
D. Router advertisements are disabled on this tunnel interface.

Answer: D

QUESTION 132
Which option describes how a network administrator prevents possible routing for VLSM subnets
that are missing from the routing table?

A. Create a route for the subnet to the null interface, and then redistribute the static route into the
   routing process.
B. Create a loopback interface with the correct subnet, and then redistribute the connected interface
   to the routing table.
C. Create a loopback interface with the correct subnet, and the routing protocol automatically injects
   it into its routing process.
D. Create a route for the subnet to the null interface, and the routing protocol automatically injects it
   into its routing process.

Answer: A

QUESTION 133
What are two potential drawbacks of VPLS?(Choose two.)

A. VPLS devices drop all VLAN-tagged packets.
B. VPLS increases the risk of routing loops.
C. VPLS is poorly suited for large, flat network implementations.
D. When more devices are added to the VPLS, packet replication is significantly increased.
E. VPLS requires manual configuration for loop prevention.

Answer: CD

QUESTION 134
What command can you enter on a Cisco router so that it can both poll a time server and be
polled by a time server?

A. ntp server

B. ntp broadcast client
C. ntp broadcast destination
D. ntp peer

Answer: D

QUESTION 135
Which two options are examples of Northbound and/or Southbound protocol?(Choose two)

A. OpenStack
B. ISIS
C. NETCONF
D. JSON
E. BGP-LS

Answer: CE

QUESTION 136
What are two differences between IPv6 ISATAP tunneling and IPv6 6to4 tunneling? (Choose two)

A. Only ISATAP tunneling transfers unicast IPv6 packets between sites.
B. Only 6to4 tunneling requires 2002:: /16 addresses.
C. Only ISATAP tunneling can transfer IPv6 multicast packets.
D. Only ISATAP tunneling transfers unicast IPv6 packets within a site.
E. Only 6to4 tunneling transfers unicast IPv6 packets within a site.

Answer: BD

QUESTION 137
A host on an Ethernet segment has a different subnet mask than the default gateway. What can be done to allow it to communicate with devices outside of this subnet?

A. Configure a static route for the host on the default gateway.
B. Configure a static ARP entry on the default gateway for the host IP address.
C. Enable gratuitous ARP on the host.
D. Enable proxy ARP on the default gateway.

Answer: D

QUESTION 138
Drag and Drop Question
Drag and drop the NETCONF layers on the left onto their appropriate description on the left.

---

transport		defines a set of base protocol operations
messages		provides a communication path between the client and server
operations		provides a framing mechanism for encoding RPCs
content		holds information on data models and protocol operations

Answer:

transport	operations
messages	transport
operations	messages
content	content

QUESTION 139
Drag and Drop Question
Drag and drop each description from the left into the matching description from the left into the matching protocol category on the right.

---

a Cisco proprietary protocol

an open standard

provides the default encapsulation of packets on serial interfaces

supports authentication

supports only synchronous interfaces

uses a magic number to identify loopbacks

uses LCP to verify lnk quaity

uses SLARP to maintan lnk keepalives

HDLC

PPP

Answer:

HDLC

a Cisco proprietary protocol

provides the default encapsulation of packets on serial interfaces

supports only synchronous interfaces

uses SLARP to maintan lnk keepalives

PPP

an open standard

supports authentication

uses a magic number to identify loopbacks

uses LCP to verify lnk quaity

QUESTION 140
Drag and Drop Question
Drag and drop each extended ping IP header option from the left onto the corresponding

description on the right.

loose		Displays output details
record		Displays the elapsed time over the round trip of the packet
strict		Displays the routers that the packet crossed along the path to the destination
timestamp		Sets the specific path the packet will travel to the destination
verbose		Specifies one or more routers through which the packet may travel to the destination

Answer:

loose		verbose
record		timestamp
strict		record
timestamp		strict
verbose		loose

QUESTION 141
Drag and Drop Question
Drag and drop each STP port role on the left to the matching statement on the right.

alternate port	The port whose path cost deems it closest to the root bridge
backup port	The port that sends the best BPDUs on it's segment
designated port	A blocked port that receives more useful BPDUs from a different bridge
root port	A blocked port that receives more useful BPDUs from it's own bridge

Answer:

alternate port	root port
backup port	designated port
designated port	alternate port
root port	backup port

QUESTION 142
Drag and Drop Question

Bidirectional PIM	All the receiver to request multicast traffic directly from the source instead of through the RP
MBGP	Delivers multicast traffic using a pull model with both shared and shortest-path trees
MSDP	Delivers multicast traffic using a push model
PIM-dense mode	Supports many-to-many multicast flows within a single domain
PIM-sparse mode	Supports non-congruent unicast and multicast topologies
SSM	Use anycast RPs to share information about active source between domains

Answer:
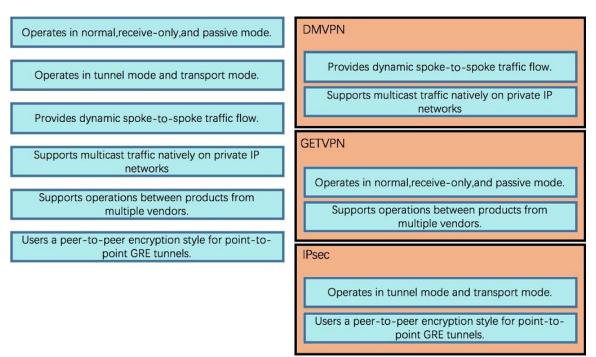
Bidirectional PIM	SSM
MBGP	PIM-sparse mode
MSDP	PIM-dense mode
PIM-dense mode	Bidirectional PIM
PIM-sparse mode	MBGP
SSM	MSDP

QUESTION 143
Drag and Drop Question

DIS	ABR
Level 1	designated router
Level 1-2	Internal backbone
Level 2	Totally Stubby internal nonbackbone

Answer:

DIS	Level 1-2
Level 1	DIS
Level 1-2	Level 2
Level 2	Level 1

QUESTION 144
Drag and Drop Question

	DMVPN
Operates in normal,receive-only,and passive mode.	
Operates in tunnel mode and transport mode.	
Provides dynamic spoke-to-spoke traffic flow.	GETVPN
Supports multicast traffic natively on private IP networks	
Supports operations between products from multiple vendors.	
Users a peer-to-peer encryption style for point-to-point GRE tunnels.	IPsec

Answer:

DMVPN
- Provides dynamic spoke-to-spoke traffic flow.
- Supports multicast traffic natively on private IP networks

GETVPN
- Operates in normal,receive-only,and passive mode.
- Supports operations between products from multiple vendors.

IPsec
- Operates in tunnel mode and transport mode.
- Users a peer-to-peer encryption style for point-to-point GRE tunnels.

Left side items:
- Operates in normal,receive-only,and passive mode.
- Operates in tunnel mode and transport mode.
- Provides dynamic spoke-to-spoke traffic flow.
- Supports multicast traffic natively on private IP networks
- Supports operations between products from multiple vendors.
- Users a peer-to-peer encryption style for point-to-point GRE tunnels.

QUESTION 145
Drag and Drop Question
Drag each statement about file-transfer protocols on the left to the matching file-transfer technology on the right.

more resilient on congested networks	FTP
operates without user-level security	
supports a clear-text password only	
supports unidirectional file transfer only	
uses TCP	TFTP
uses UDP	

Answer:

more resilient on congested networks	FTP
operates without user-level security	more resilient on congested networks
supports a clear-text password only	supports a clear-text password only
supports unidirectional file transfer only	uses TCP
uses TCP	TFTP
uses UDP	operates without user-level security
	supports unidirectional file transfer only
	uses UDP

QUESTION 146
Drag and Drop Question

10.120.75.10/14	10.112.0.0
10.121.55.10/18	10.120.0.0
10.121.100.50/12	10.121.0.0
10.121.221.30/17	10.121.128.0
10.125.20.101/18	10.125.0.0
10.125.80.150/18	10.125.64.0

Answer:

10.120.75.10/14	10.121.100.50/12
10.121.55.10/18	10.120.75.10/14
10.121.100.50/12	10.121.55.10/18
10.121.221.30/17	10.121.221.30/17
10.125.20.101/18	10.125.20.101/18
10.125.80.150/18	10.125.80.150/18

QUESTION 147
Drag and Drop Question

command	provides accounting information for events such as reboots and enabling accounting
connection	provides accounting information for EXEC shell commands at a specific privilege level
EXEC	provides accounting information for PPP sessions
network	provides accouting information for" start" and "stop" records when calls pass and fail user authentication
resource	provides accounting information for Telnet connections
system	provides accounting information for user shell commands

Answer:

command	system
connection	command
EXEC	network
network	resource
resource	connection
system	EXEC

QUESTION 148
Drag and Drop Question

data pattern	identifies non-conforming MTU devices along the path to the destination
set DF bit in IP header	identifies the smallest MTU allowed along the path to the destination
sweep range of sizes	troubleshoots framing errors and clocking problems
type of service	set the QoS
validate reply data	used to confirm the data received from the destination

Answer:

data pattern	sweep range of sizes
set DF bit in IP header	set DF bit in IP header
sweep range of sizes	data pattern
type of service	type of service
validate reply data	validate reply data

QUESTION 149
Drag and Drop Question
Drag each NTP command on the left to its effect on the right.

ntp master	Configures an external time source.
ntp orphan	Configures the device as an authoritative time server.
ntp peer	Configures the device to simulate a UTC source when real-time time sources are inaccessible.
ntp refclock	Configures the device to synchronize its time against a time server.
ntp server	Configures the device to synchronize its time against another device.

Answer:

	ntp refclock
	ntp master
	ntp orphan
	ntp server
	ntp peer

QUESTION 150
Drag and Drop Question
Drag each statement about EIGRP neighbor peering on the left to the matching peering type on the right

Forms a half-mesh topology through peers configured with the "unicast-listen" keyword.	Multicast
The default EIGRP peering method.	OTP point-to-point
Uses the "neighbor" statement on a non-passive interface with default options.	OTP route-reflector
Uses the "remote" keyword in the neighbor statement to form peerings.	Unicast

Answer:

	The default EIGRP peering method.
	Uses the "remote" keyword in the neighbor statement to form peerings.
	Forms a half-mesh topology through peers configured with the "unicast-listen" keyword.
	Uses the "neighbor" statement on a non-passive interface with default options.

QUESTION 151
Which interior gateway protocol is based on open standards, uses a shortest-path first algorithm, provides native protocols, and operates at the data link layer?
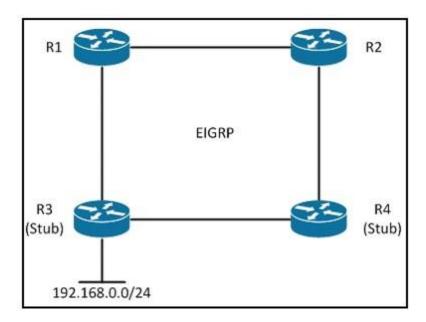
 A.   IS-IS

B. EIGRP
C. BGP
D. OSPF

Answer: A

QUESTION 152
Refer to the exhibit. All routers are running EIGRP and the network has converged. R3 and R4 are configured as EIGRP Stub. If the link between R1 and R3 goes down, which statement is true?

A. R1 sends traffic destined to 192.168.0.100 via R2.
B. R2 does not have a route to 192.168.0.0/24 in the routing table.
C. The prefix 192.168.0.0/24 becomes stuck-in-active on R4.
D. R3 does not advertise 192.168.0.0/24 to R4 anymore.

Answer: B

QUESTION 153
Refer to the exhibit. If the route to 10.1.1.1 is removed from the R2 routing table, which server becomes the master NTP server?


```
R2#show run | include ntp
ntp server 10.1.1.1 prefer
ntp server 10.3.3.3
ntp server 10.4.4.4
```

A. R2
B. the NTP server at 10.3.3.3

C. the NTP server at 10.4.4.4
D. the NTP server with the lowest stratum number

Answer: D

QUESTION 154
Which set of commands conditionally advertises 172.16.0.0/24 as long as 10.10.10.10/32 is in the routing table?

A.
```
neighbor x.x.x.x advertise-map ADV exist-map EXT
route-map ADV
 match IP address prefix-list ADV
!
route-map EXT
 match IP address prefix-list EXT
!
ip prefix-list EXT permit 172.16.0.0/24
!
ip prefix-list ADV permit 10.10.10.10/32
```

B.
```
neighbor x.x.x.x advertise-map ADV exist-map EXT
route-map ADV
 match IP address prefix-list ADV
!
route-map EXT
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```

C.
```
neighbor x.x.x.x advertise-map ADV
noute-map ADV
 match IP address prefix-list ADV
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```

D.
```
neighbor x.x.x.x advertise-map ADV
noute-map ADV
 match IP address prefix-list ADV
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```

Answer: B

QUESTION 155
Which component of the BGP ORF can you use to permit and deny routing updates?

A. match
B. action
C. AFI
D. SAFI
E. ORF type

Answer: A

QUESTION 156
Which statement about UDLD is true?

A. The udld reset command resets ports that have been error-disabled by both UDLD and Fast UDLD.
B. Fast UDLD is configured in aggressive mode.
C. Only bidirectional link failures can be detected in normal mode.
D. Each switch in a UDLD topology can send and receive packets to and from its neighbors.

Answer: A

QUESTION 157
Which option is a core event publisher for EEM?

A. Timer
B. Policy Director
C. Applet
D. Script

Answer: A

QUESTION 158
Which statement about SSHv2 is true?

A. Routers acting as SSH clients can operate without RSA keys.

B. SSHv2 supports port forwarding and compression.
C. The RSA key pair size must be at least 512.
D. You must configure a default gateway before you enable SSHv2.

Answer: A

QUESTION 159
Which statement about Cisco Discovery Protocol is true?

A. The multicast address 0100.0cdd.dddd is used as the destination address for periodic advertisements.
B. An inactive VLAN that is configured on an access port passes periodic Cisco Discovery Protocol advertisements.
C. The multicast address 0100.0ccc.ccd is used as the destination address for periodic advertisements.
D. A VLAN must be active on an access port before periodic Cisco Discovery Protocol advertisements are passed.

Answer: D

QUESTION 160
Which three topologies are standardized by the Metro Ethernet Forum? (Choose three)

A. E-LAN
B. VPWS
C. E-Tree
D. E-Line
E. NPE
F. PNNI

Answer: ACD

QUESTION 161
A floating static route appears in the routing table of an interface even when the interface is unusable.
Which action can you take to correct the problem?

A. Remove the permanent option from the static route.
B. Correct the administrative distance.
C. Configure the floating static route to point to another route in the routing table.
D. Correct the DHCP-provided route on the DHCP server.

Answer: A

QUESTION 162
Refer to the exhibit. Which statement is true?

```
RP1#show ipv6 mroute
  Multicast Routing Table
  Flags: D - Dense, S - Sparse, B - Bidir Group, s - SSM Group,
            C - Connected, L - Local, I - Received Source Specific Host Report,
            P - Pruned, R - RP-bit set, F - Register flag, T - SPT-bit set,
            J - Join SPT
  Timers: Uptime/Expires
  Interface state: Interface, State

  (*, FF7E:200:2A02:B111:FC02:1:11FF:11EE), 00:00:35/never, RP
  2A02:B111:FC02:1::1, flags: SCLJ
      Incoming interface: Null
      RPF nbr: ::
      Immediate Outgoing interface list:
         Ethernet2/0, Forward, 00:00:35/never
```

A. The output shows an IPv6 multicast address with link-local scope.
B. The output shows an IPv6 multicast address that is used for unique local sources only.
C. The output shows an IPv6 multicast address that can be used for BIDIR-PIM only.
D. The output shows an IPv6 multicast address with embedded RP.

Answer: D

QUESTION 163
Which option describes how the IP address is assigned when you configure a Layer 3
EtherChannel interface?

A. You must assign the IP address to the tunnel interface.
B. The last IP address added to the EtherChannel is used automatically.
C. You must assign the IP address to a port channel logical interface.
D. The first IP address added to the EtherChannel is used automatically.

Answer: C

QUESTION 164
Refer to the exhibit. Which two route types are advertised by a router with this configuration?
(Choose two.)

```
router eigrp 1

network 10.0.0.0

eigrp stub
```

A. connected
B. external
C. summary

D. static
E. redistributed

Answer: AC

QUESTION 165
Which two conditions are required for tracking the interface IP routing state? (Choose two)

A. A VRF must be enabled on the interface.
B. IP routing must be disabled on the interface.
C. Cisco Express Forwarding must be disabled on the interface.
D. The interface line protocol must be up.
E. A known IP address must be configured on the interface.

Answer: DE

QUESTION 166
According to the networking best practices, which network device should be used for optimization and rate limiting?

A. the provider core device
B. the provider edge device
C. the customer core device
D. the coustomer edge device

Answer: D

QUESTION 167
Which feature must be enable to support IGMP snooping on a VLAN interface that operating without multicast routing?

A. The IGMP snooping enquirer
B. Auto-RP
C. PIM snooping
D. MLD

Answer: A

QUESTION 168
Which command can you enter to disable logging for VTY lines?

A. no logging monitor
B. no logging count
C. no logging buffer
D. no logging console
E. no logging trap

Answer: A

Explanation:
No logging console is for CTY.
No logging monitor is for VTY.

QUESTION 169
Which feature monitors network events and takes automated action based on scripts configured by the administrator?

A. NetFlow
B. Performance Monitoring
C. EPC
D. EEM

Answer: D

QUESTION 170
Which IPv4 feature prevents multicast joins on a per-port basis?

A. MLD filtering
B. IGMP snooping
C. IGMP filtering
D. PIM snooping

Answer: C
Explanation:
IGMP filtering is used to prevent multicast joins.
IGMP snooping is to prevent unnecessary multicast flooding.

QUESTION 171
Which two statements about PfR are true?(Choose two)

A. It manages traffic classes
B. It provides a narrower scope of route control than OER.
C. It provides intelligent route control on a per-application basis.
D. It supports split tunneling and spoke-to-spoke links.
E. It always prefers the least cost path.

Answer: AE

QUESTION 172
Which statement about EIGRP request packets is true?

A. They determine whether a destination is reachable
B. They are transmitted unreliably
C. They are transmitted via broadcast
D. They are sent in response to queries

Answer: B

QUESTION 173
Which routing protocol is not supported with VRF-lite?

A. IS-IS
B. OSPF
C. EIGRP
D. BGP

Answer: A

QUESTION 174
How can you reduce latency on a VoIP network?

A. Implement a congestion-avoidance algorithm
B. Implement low latency queuing
C. Configure an SLA to collect information on packet loss
D. Set the IP SLA timeout to 1000 milliseconds.
E. Implement fast retransmission.

Answer: B

QUESTION 175
Which two statements about the host address 172.150.100.10/18 are true?(Choose two)

A. The network address is 172.150.0.0
B. The network address is 172.150.64.0
C. The network address is 172.150.100.0
D. The broadcast address is 172.150.127.255
E. The broadcast address is 172.150.255.255
F. The broadcast address is 172.150.100.255

Answer: BD

QUESTION 176
Refer to the exhibit. What are two effects of the given configuration?(Choose two)

A. For a particular event,an SNMP inform may be sent more than once.
B. SNMP informs consume less bandwidth than SNMP trap
C. SNMP informs are sent to the SNMP manager without acknowledgement.
D. SNMP informs are sent to the SNMP agent without acknowledgement.
E. For a particular evevt,an SNMP inform is sent only once
F. SNMP informs are sent to the SNMP manager and acknowledgement.

Answer: AF

QUESTION 180
If you configure a router interface for both IPv4 and IPv6 on an IS-IS network in single-topology mode,what additional configuration is required?

A. IPv4 and IPv6 must be configured on different routing protocols.
B. IPv4 and IPv6 must be configured to run the same IS-IS level.
C. IPv4 and IPv6 must be configured with different metric types
D. IPv4 and IPv6 addresses must be configured with the same prefix length.

Answer: B

QUESTION 181
Which extended ping IP header option allows you to specify one or more hops over which the packets will travel without specifying the full path?

A. verbose
B. loose
C. strict
D. record

Answer: B
Explanation:
http://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13730-ext-ping-trace.html
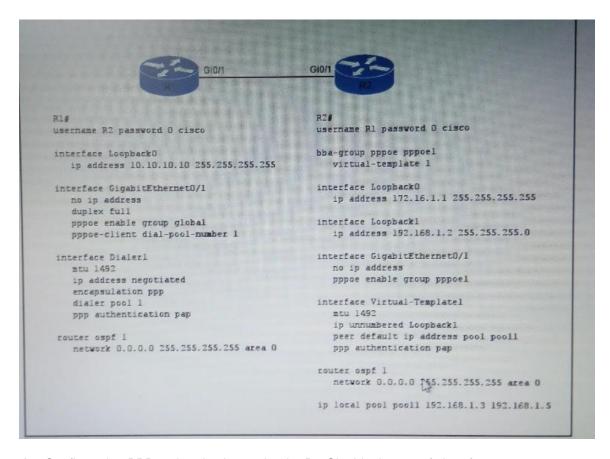Loose allows you to influence the path by specifying the address(es) of the hop(s) you want the packet to go through.
Verbose is automatically selected along with any other option.

QUESTION 182
Refer to the exhibit. If R1 and R2 cannot establish an OSF neighbor relationship, which two actions can you take to resolve the problem? (Choose two)

```
R1#
username R2 password 0 cisco

interface Loopback0
    ip address 10.10.10.10 255.255.255.255

interface GigabitEthernet0/1
    no ip address
    duplex full
    pppoe enable group global
    pppoe-client dial-pool-number 1

interface Dialer1
    mtu 1492
    ip address negotiated
    encapsulation ppp
    dialer pool 1
    ppp authentication pap

router ospf 1
    network 0.0.0.0 255.255.255.255 area 0
```

```
R2#
username R1 password 0 cisco

bba-group pppoe pppoe1
    virtual-template 1

interface Loopback0
    ip address 172.16.1.1 255.255.255.255

interface Loopback1
    ip address 192.168.1.2 255.255.255.0

interface GigabitEthernet0/1
    no ip address
    pppoe enable group pppoe1

interface Virtual-Template1
    mtu 1492
    ip unnumbered Loopback1
    peer default ip address pool pool1
    ppp authentication pap

router ospf 1
    network 0.0.0.0 255.255.255.255 area 0

ip local pool pool1 192.168.1.3 192.168.1.5
```

A. Configuration PPP authentication under the R2 Gigabitethernet 0/1 interface
B. Change the ip local pool command on R2 to ip local pool pool1 192.168.1.2 192.168.1.5
C. Configuration R1 to send the username and password on the Dialer 1 interface
D. Change the PPP authentication to CHAP authentication
E. Configure PPP encapsulation under the R1 virtual-template interface

Answer: CE

QUESTION 183
Which two statemwnts about the host address 10.88.100.10/13 are true?(Choose two.)

A. The network address is 10.64.0.0
B. The network address is 10.88.100.0
C. The network address is 10.88.0.0
D. The broadcast address is 10.95.255.255
E. The broadcast address is 10.88.255.255
F. The broadcast address is 10.64.255.255

Answer: CD

QUESTION 184
Refer to the exhibit. Which two statements are true?(Choose two)

```
Routing Process "ospf 1" with ID 1.1.1.1
Start time: 1w5d, Time elapsed: 4d11h
Supports only single TOS(TOS0) routes
Supports opaque LSA
Supports Link-local Signaling (LLS)
Supports area transit capability
Router is not originating router-LSAs with maximum metric
Initial SPF schedule delay 5000 msecs
Minimum hold time between two consecutive SPFs 10000 msecs
Maximum wait time between two consecutive SPFs 10000 msecs
Incremental-SPF disabled
Minimum LSA interval 5 secs
Minimum LSA arrival 1000 msecs
LSA group pacing timer 240 secs
Interface flood pacing timer 33 msecs
Retransmission pacing timer 66 msecs
Number of external LSA 0. Checksum Sum 0x000000
Number of opaque AS LSA 0. Checksum Sum 0x000000
Number of DCbitless external and opaque AS LSA 0
Number of DoNotAge external and opaque AS LSA 0
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
Number of areas transit capable is 0
External flood list length 0
IETF NSF helper support enabled
Cisco NSF helper support enabled
Reference bandwidth unit is 100 mbps
   Area BACKBONE(0)
        Number of interfaces in this area is 2 (1 loopback)
        Area has no authentication
        SPF algorithm last executed 00:00:11.176 ago
        SPF algorithm executed 7 times
        Area ranges are
        Number of LSA 3. Checksum Sum 0x0140E9
        Number of opaque link LSA 0. Checksum Sum 0x000000
        Number of DCbitless LSA 0
        Number of indication LSA 0
        Number of DoNotAge LSA 0
        Flood list length 0
```

A. This is the output of the show ip ospf command
B. This is the output the show ip protocols command
C. This router is an ABR
D. Authentication is not configured for the area
E. This router is an ASBR

Answer: AD

QUESTION 185
Which IS-IS metric style is most suitable for MPLS traffic engineering?

A. narrow
B. wide
C. transition
D. flat

Answer: B

QUESTION 186
Which feature must be enabled to support IGMP snooping on a VLAN that is operating without a multicast router?

A. PIM snooping
B. Auto-RP
C. The IGMP snooping querier
D. MLD

Answer: C

QUESTION 187
Which two statements about SNMP are true? (Choose two.)

A. SNMPv3 provides privacy and access control.
B. All SNMP versions use get, getNext, and getBulk operations.
C. SNMPv3 uses encrypted community strings.
D. SNMPv1 and SNMPv2c use plaintext community strings.
E. All SNMP versions support bulk retrieval and detailed error messages.

Answer: AD

QUESTION 188
Which three conditions must be met for IP routing state of an interface to be up? (Choose three)

A. Cisco Express Forwarding must be enabled
B. Cisco Discovery Protocol must be enabled on the interface
C. The interface line-protocol state must be up
D. A backup interface must be enabled
E. Active IP routing must be enabled
F. The interface must have a known IP address

Answer: CEF

QUESTION 189
Which two statements about DMVPN are true? (Choose two)

A. It is a tunnel-less VPN technology
B. It uses automatic IPSec triggering to build IPSec tunnels
C. It is an open standard
D. It supports multicast and QoS within tunnels
E. It provides a routable interface for terminating IPSec tunnels
F. It allows both the hub and the spokes to use dynamic IP addresses

Answer: BD

QUESTION 190
Which two options are types of EVCs?(Choose two)

A. GRE
B. NSSA
C. E-line
D. E-LAN
E. NMBA

Answer: CD

QUESTION 191
Refer to the exhibit. Which tag will be applied to the 172.16.50.0/24 route?


```
ip prefix-list cciel seq 5 permit 172.16.0.0/17 le 24
ip prefix-list ccie2 seq 5 permit 172.16.128.0/17 le 24
ip prefix-list ccie3 seq 5 permit 172.17.128.0/17 le 24

route-map ccie permit 10
    match ip address prefix-list cciel
    set tag 10
route-map ccie permit 20
    match ip address prefix-list ccie2
    set tag 20
route-map ccie permit 30
    match ip address prefix-list ccie3
    set tag 30
route-map ccie permit 40
    set tag 40
```

A. 10
B. 20
C. 30
D. 40

Answer: A

QUESTION 192
Which three configuration settings match for switches to be in the same MST region?(Choose three)

A. password
B. domain name
C. VLAN names
D. revision number
E. VLAN-to-instance assignment
F. region name

Answer: DEF

QUESTION 193
Which feature can be used to block traffic from one host to another within one VLAN on a Layer 2 switch?

A. port security
B. dot1x
C. access list
D. protected ports

Answer: D

QUESTION 194
Which statements about PMTUD is true?

A. It is supported by TCP and UDP.
B. It increases the connection's send MSS value to prevent fragmentation.
C. GRE tunnels use PMTUD to fragment data packets by default.
D. It is used to prevent fragmentation of packets at the endpoint of a TCP connection.
E. It is used to prevent fragmentation of packets traveling across a smaller MTU link between two endpoints.

Answer: A

QUESTION 195
When you implement the EIGRP add-paths feature, which configuration can cause routing issues on a DMVPN circuit?

A. disabling ECMP mode underthe EIGRP process.
B. disabling automatic summarization
C. enabling next-hop-self under the EIGRP process.
D. enabling synchronization under the EIGRP process
E. disabling the default variance underthe EIGRP process
F. disabling NHRP when deploying EIGRP over DMVPN

Answer: E

QUESTION 196
You are performing a system diagnostics on a CSU in local loop mode and notice that the mineseen counter has failed to increment.
Which type of problem does this behavior indicate?

A. a cabling problem
B. an encoding problem
C. a framing problem
D. a timing problem

Answer: D

QUESTION 197
Which two statements about IPsec VTIs are true? (Choose two)

A. Dynamic VTIs allow you to mix proxy types.
B. The dynamic VTI is a multipoint interface that can support multiple IPsec SAs.
C. The IKE SA can be bound to both the VTI and the crypto map in the router.
D. Static VTIs can use the "IP any any" traffic selector only.
E. The IPsec transform set must be configured in transport mode.
F. Static VTIs can encapsulate both IPv4 and IPv6 packets, but IPv4 can carry IPv4 packets and IPv6 can carry IPv6 packets.

Answer: DF

QUESTION 198
Refer to the exhibit. Which two statements about the output are true?(Choose two.)

```
Switch# show spanning-tree vlan 1 detail

VLAN0001 is executing the ieee compatible Spanning Tree protocol
  Bridge Identifier has priority 32768, sysid 1, address
  0007.0e8f.04c0 Configured hello time 2, max age 20, forward
  delay 15 Current root has priority 8192, address 0007.4f1c.e847
  Root port is 65 (GigabitEthernet2/1), cost of root path is 119
  Topology change flag not set, detected flag not set
  Number of topology changes 1 last change occurred 00:00:35 ago
            from GigabitEthernet1/1
  Times:   hold 1, topology change 35, notification 2
           hello 2, max age 20, forward delay 15
  Timers: hello 0, topology change 0, notification 0, aging 300

Switch#
```

A. Setting the priority of this switch to 0 for VLAN 1 would cause it to become the new root.
B. This switch is the root bridge for VLAN1
C. Spanning-tree PortFast should not be enabled on GigabitEthernet2/1
D. 802.1w spanning tree is being used
E. Spanning tree PortFast is enabled on GigabitEthernet1/1

Answer: AC

QUESTION 199
Which encryption algorithm is enabled by the Cisco IOS command service password-encryption ?

A. MD5
B. Cisco Type-5
C. Cisco AES
D. Cisco Type-7
E. TKIP

Answer: D

QUESTION 200
Which three fields are present in the IPv6 header? (Choose three)

A. Next Header
B. Traffic Class
C. Options
D. Time to Live
E. Flags
F. Flow Label

Answer: ABF

QUESTION 201
Which three technologies can be used to implement redundancy for IPv6? (Choose three)

A. IPv6 NA
B. NHRP
C. HSRP
D. DVMRP
E. GLBP
F. IPv6 RA

Answer: CEF

QUESTION 202
An IPv6 network has different MTUs on different segments, if the network is experiencing reliability issues, which option is the most likely reason?

A. ICMPv6 is filtered.
B. The Do Not Fragment bit is marked.
C. HSRPv6 is configured incorrectly.
D. The MTU size is greater than 1470 bytes.

Answer: A

QUESTION 203
What are two reasons for an OSPF neighbor relationship to be stuck in exstart/exchange state? (Choose two.)

A. There is an area ID mismatch
B. There is an MTU mismatch
C. Both routers have the same router ID.
D. There is an authentication mismatch
E. Both routers have the same OSPF process ID

Answer: BC

QUESTION 204
Which IP SLA operation requires Cisco endpoints?

A. UDP Jitter for VoIP
B. ICMP Path Echo
C. ICMP Echo
D. UDP Jitter

Answer: A

QUESTION 205
What are two functions of an NSSA in an OSPF network design ?(Choose two)

A. It overcomes issues with suboptimal routing when there are multiple exit points from the areas
B. It uses opaque LSAs
C. It allows ASBRs to inject extemal routing information into the area
D. An ASBR advertises type 7 LSAs into the area
E. An ABR advertises type 7 LSAs into the area

Answer: CD

QUESTION 206
Which two statements about out-of-order packet transmission are true? (Choose two.)

A. It can occur when packets are duplicated and resent
B. It occurs only over TCP connections
C. It can occur when packets are dropped and resent
D. It can occur when packets take the same path to arrive at the same destination
E. It can occur when packets use different paths to arrive at the same destination.

Answer: BE

QUESTION 207
What is used to acknowledge the receipt of LSPs on a point-to-point network in IS-IS?

A. hello
B. CSNP
C. PSNP
D. IIH
E. CSH

Answer: C

QUESTION 208
Which two options are restrictions of BGP ORF? (Choose two)

A. It can be used only with IPv4 multicast.
B. It requires access lists to match routes.

C. It can be used only with eBGP.
D. Multicast is not supported.
E. It can be used only with iBGP.

Answer: CD

QUESTION 209
What are the two Cisco recommended methods for reducing the size of the TCAM on a Layer 3 switch? (Choose two)

A. Use the ip route profile command.
B. Adjust the output queue buffers.
C. Filter unwanted routes.
D. Optimize the SDM template.
E. Use summary routes.

Answer: CE

QUESTION 210
Refer to the exhibit. Which statement is true?

A. The Cisco PfR state is UP; however, the external interface Et0/1 of border router 10.1.1.1 has exceeded the maximum available bandwidth threshold.
B. The Cisco PfR state is UP; however, an issue is preventing the border router from establishing a TCP session to the master controller.
C. The Cisco PfR state is UP and is able to monitor traffic flows; however, MD5 authentication has not been successful between the master controller and the border routers.
D. The Cisco PfR State is UP; however, the receive capacity was not configured for inbound traffic.
E. The Cisco PfR state is UP, and the link utilization out-of-policy threshold is set to 90 percent for traffic exiting the external links.

Answer: E

QUESTION 211
Which two statements about TCP MSS are true? (Choose two.)

A. The two endpoints in a TCP connection report their MSS values to one another.
B. It operates at Layer 3.
C. MSS values are sent in TCP SYN packets
D. It sets the maximum amount of data that a host sends in an individual datagram
E. It sets the minimum amount of data that a host accepts in an individual datagram

Answer: CD

QUESTION 212
Which Cisco PfR monitoring mode is recommended for Internet edge deployments?

A. active mode
B. fast mode
C. active throughput mode
D. passive mode

Answer: D

QUESTION 213
Which Catalyst switch feature configured on a per-port basis can be used to prevent attached hosts from joining select multicast group?

A. IGMP Filtering
B. MLD Filtering
C. IGMP Snooping
D. PIM Snooping

Answer: A

QUESTION 214
Which information is contained in an OSPF Type 7 Not-So-Stubby Area NSSA External LSA?
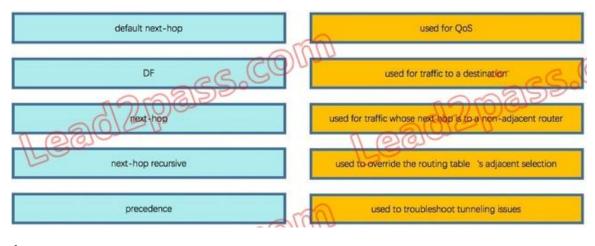
A. The paths and costs to all OSPF NSSA areas that are external to the current area.
B. The path and costs to reach other stub area border routers in the OSPF routing domain.
C. The address of routers that connect the current area to other areas and the cost to reach those routers.
D. External network address,mask,and cost to reach each network that is external to the OSPF domain and only within the NSSA
E. The external network address,mask,and cost to reach networks that are external to the OSPF NSSA,including the default route.

Answer: D
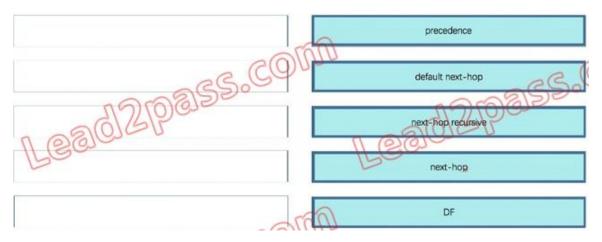
QUESTION 215
Drag and Drop Question
Drag each set action for policy-based routing on the left to the matching statement on the right.

default next-hop	used for QoS
DF	used for traffic to a destination
next-hop	used for traffic whose next-hop is to a non-adjacent router
next-hop recursive	used to override the routing table 's adjacent selection
precedence	used to troubleshoot tunneling issues

Answer:

	precedence
	default next-hop
	next-hop recursive
	next-hop
	DF

QUESTION 216
Drag and Drop Question

6to4 tunneling	Configures parallel IPv4 and IPv6 network infrastructure and address
duel stack	Translates traffic between IPv4 and IPv6 address
IPv6 to IPv4 GRE tunneling	Uses any IPv6 unicast site address
ISATAP tunneling	Uses IPv6 site address with in the 2002::/16 prefix
NAT-PT	Uses standard point-to-point encapsulation

Answer:

	duel stack
	NAT-PT
	ISATAP tunneling
	6to4 tunneling
	IPv6 to IPv4 GRE tunneling

QUESTION 217
Drag and Drop Question
IPv4 host address on the left to the matching network address on the right.

10.120.75.10/14	10.121.63.255
10.121.55.10/18	10.121.127.255
10.121.75.30/17	10.123.255.255
10.121.100.50/12	10.125.63.255
10.124.20.10/15	10.125.255.255
10.125.20.101/18	10.127.255.255

Answer:

10.121.55.10/18
10.121.75.30/17
10.120.75.10/14
10.125.20.101/18
10.124.20.10/15
10.121.100.50/12

QUESTION 218
Drag and Drop Question
Drag and drop each EIGRP packet type from the left onto the matching description on the right.

hello		a packet that establishes and maintains neighbor adjacencies
query		a packet that is sent to inform neighbors of the presence of a feasible successor
reply		a packet that is sent to neighbors following the loss of a feasible successor
request		a packet that provides destination information so that neighbors can populate their topology tables
update		a packet that is used in route server applications

Answer:

hello	ns neighbor adjacencies
reply	ors of the presence of a or
query	ollowing the loss of a r
update	information so that opology tables
request	rver applications

QUESTION 219
Drag and Drop Question

A policy written in Tcl	EEM Applet
Defined offline and copied to the device	
Registered only when an event is specified	
Supports events without action	EEM Script
Supports keyword extensions for developing policies	
Supports only one event Configuration command in its configuration	

Answer:

EEM Applet

Registered only when an event is specified

Supports events without action

Supports only one event Configuration command in its configuration

EEM Script

A policy written in Tcl

Supports keyword extensions for developing policies

Defined offline and copied to the device

QUESTION 220
Drag and Drop Question

DHCP ACK

DHCP DECLINE

DHCP DISCOVER

DHCP NAK

DHCP OFFER

DHCP REQUEST

Client to Server Communication

Server to Client Communication

Answer:

Client to Server Communication

DHCP DISCOVER

DHCP REQUEST

DHCP DECLINE

Server to Client Communication

DHCP ACK

DHCP OFFER

DHCP NAK

QUESTION 221
Drag and Drop Question

conservers IPv4 addresses

creates a unique binding for every translation

performs 1:1 translation

performs 1:N translation

provides end-to-end address transparency

requires IPv6 address assignments that can be translated to IPv4

supports all modes of IPv6 address assignment

wastes IPv4 address

Stateless NAT64

Stateful NAT64

Answer:

Stateless NAT64
- performs 1:1 translation
- provides end-to-end address transparency
- requires IPv6 address assignments that can be translated to IPv4
- wastes IPv4 address

Stateful NAT64
- conservers IPv4 addresses
- creates a unique binding for every translation
- performs 1:N translation
- supports all modes of IPv6 address assignment

QUESTION 222
Drag and Drop Question
Drag and Drop Question the OpenStack projects from the left onto their function on the right.

Neutron	provides connectivity for the VM
Nova	provides volume for the VM
Glance	provisions the VM
Cinder	provides the image for the VM

Answer:

	Neutron
	Cinder
	Nova
	Glance

QUESTION 223
Which encapsulation is used when deploying EIGRP OTP?

A. GRE
B. LISP
C. PPP

D. dot1q
E. MPLS
F. ISL

Answer: B

QUESTION 224
What are three valid HSRP states? (Choose three)

A. listen
B. learning
C. full
D. established
E. speak
F. INIT

Answer: ABE

QUESTION 225
Refer to the exhibit. What kind of problem is detected?

```
Router#ping
Protocol [ip]:
Target IP address: 209.165.200.200
Repeat count [5]: 1
Datagram size [100]:
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface:
Type of service [0]:
Set DF bit in IP header? [no]: y
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]:
Sweep range of sizes [n]: y
Sweep min size [36]: 1460
Sweep max size [18024]: 1500
Sweep interval [1]:
Type escape sequence to abort.
Sending 41, [1460..1500]-byte ICMP Echos to 209.165.200.200,
timeout is 2 seconds:
Packet sent with the DF bit set
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!MMMMMMMM
Success rate is 80 percent (33/41), round-trip min/avg/max =
28/28/32 ms
Router#
```

A. The packet types that are being sent are unknown.

B. The maximum MTU size that can be used is 1492.
C. Waiting for a reply timed out.
D. Fragmentation starts to occur when the MTU of 1472 is reached.

Answer: B

QUESTION 226
Refer to the exhibit. The OSPF adjacency between two routers cannot be established.
What is the root cause of the problem?

```
⊟Open Shortest Path First                              ⊟Open Shortest Path First
  ⊟OSPF Header                                           ⊟OSPF Header
     Version: 2                                             Version: 2
     Message Type: Hello Packet (1)                         Message Type: Hello Packet (1)
     Packet Length: 44                                      Packet Length: 44
     Source OSPF Router: 10.155.255.1 (10.155.255.1)        Source OSPF Router: 10.155.255.2 (10.155.255.2)
     Area ID: 0.0.0.10 (0.0.0.10)                           Area ID: 0.0.0.10 (0.0.0.10)
     Checksum: 0x0000 (None)                                Checksum: 0x0000 (None)
     Auth Type: Cryptographic (2)                           Auth Type: Cryptographic (2)
     Auth Crypt Key id: 121                                 Auth Crypt Key id: 121
     Auth Crypt Data Length: 16                             Auth Crypt Data Length: 16
     Auth Crypt Sequence Number: 1421584632                 Auth Crypt Sequence Number: 1421584519
     Auth Crypt Data: 589382284493a1312be3511bdf6673cd      Auth Crypt Data: e135d573c8e2f5e89cd336e80cccf398
  ⊟OSPF Hello Packet                                     ⊟OSPF Hello Packet
     Network Mask: 255.255.255.0 (255.255.255.0)            Network Mask: 255.255.255.0 (255.255.255.0)
     Hello Interval [sec]: 10                               Hello Interval [sec]: 10
    ⊟Options: 0x12 (L, E)                                  ⊟Options: 0x18 (L, NP)
       0... .... = DN: Not set                                0... .... = DN: Not set
       .0.. .... = O: Not set                                 .0.. .... = O: Not set
       ..0. .... =   DC: Demand Circuits are NOT supported    ..0. .... =   DC: Demand Circuits are NOT supported
       ...1 .... =   L: The packet contains LLS data block    ...1 .... =   L: The packet contains LLS data block
       .... 0... =   NP: NSSA is NOT supported                .... 1... =   NP: NSSA is supported
       .... .0.. =   MC: NOT Multicast Capable                .... .0.. =   MC: NOT Multicast Capable
       .... ..1. =   E : External Routing Capability          .... ..0. =   E : NO External Routing Capability
       .... ...0 =   MT: NO Multi-Topology Routing            .... ...0 =   MT: NO Multi-Topology Routing
     Router Priority: 1                                     Router Priority: 10
     Router Dead Interval [sec]: 40                         Router Dead Interval [sec]: 40
     Designated Router:  10.155.135.1 (10.155.135.1)        Designated Router:  10.155.135.2 (10.155.135.2)
     Backup Designated Router: 0.0.0.0 (0.0.0.0)            Backup Designated Router: 0.0.0.0 (0.0.0.0)
  ⊞OSPF LLS Data Block                                   ⊞OSPF LLS Data Block
```

A. Both routers are designated routers.
B. different area ID
C. mismatched OSPF network types
D. authentication error
E. area type mismatch

Answer: E

QUESTION 227
Refer to the exhibit. Which two statements about the given NetFlow configuration are
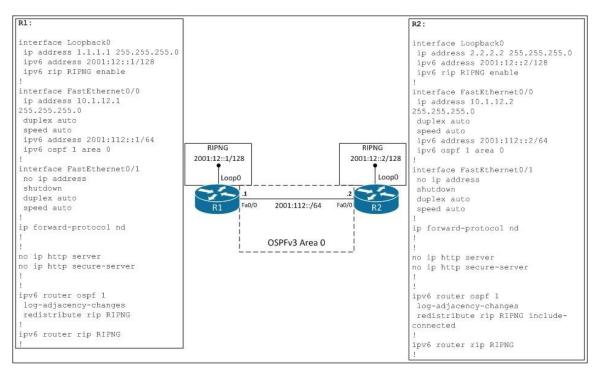true?(Choose two)

```
mls ip multicast flow-stat-timer 9
mls flow ip interface-full
ip flow-export version 5
ip flow-export destination 172.17.17.212 9995
ip flow-aggregation cache protocol-port
ip flow-aggregation cache prefix
```

A. It supports a maximum of 2048 entries
B. It supports only IPv4 flows
C. It supports both IPv4 and IPv6 flows
D. It supports only IPv6 flows
E. It uses the default port to send flows to the exporter

Answer: BE

QUESTION 228
Refer to the exhibit. Which OSPFv3 routes will be visible in the routing table of R2?


```
R1:

interface Loopback0
 ip address 1.1.1.1 255.255.255.0
 ipv6 address 2001:12::1/128
 ipv6 rip RIPNG enable
!
interface FastEthernet0/0
 ip address 10.1.12.1
255.255.255.0
 duplex auto
 speed auto
 ipv6 address 2001:112::1/64
 ipv6 ospf 1 area 0
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
ipv6 router ospf 1
 log-adjacency-changes
 redistribute rip RIPNG
!
ipv6 router rip RIPNG
!
```

```
R2:

interface Loopback0
 ip address 2.2.2.2 255.255.255.0
 ipv6 address 2001:12::2/128
 ipv6 rip RIPNG enable
!
interface FastEthernet0/0
 ip address 10.1.12.2
255.255.255.0
 duplex auto
 speed auto
 ipv6 address 2001:112::2/64
 ipv6 ospf 1 area 0
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
ipv6 router ospf 1
 log-adjacency-changes
 redistribute rip RIPNG include-
connected
!
ipv6 router rip RIPNG
!
```

A. 2001:12::1/128
B. 2001:12::1/128, 2001:112::1/128
C. 2001:12::2/128

D.   No OSPFv3 routes will be visible.

Answer: D
Explanation:
You should add "include-connected" when redistributing from RIPNG to OSPFv3 to redistribute that loopback.

QUESTION 229
Refer to the exhibit. Which AS paths are matched by this access list?

```
ip as-path access-list 1 permit ^64496_[0-9]*$
```

A.   the origin AS 64496 only
B.   the origin AS 64496 and any ASs after AS 64496
C.   the directly attached AS 64496 and any ASs directly attached to AS 64496
D.   the directly attached AS 64496 and any longer AS paths

Answer: C

QUESTION230
What is the main function of VRF-lite?

A.   To allow devices to use labels to make Layer 2 Path decisions
B.   To segregate multiple routing tables on a single device
C.   To connect different autonomous systems together to share routes
D.   To route IPv6 traffic across an IPv4 backbone

Answer: B

QUESTION 231
Which feature can you implement to most effectively protect customer traffic in a rate-limited WAN Ethernet service?

A.   HCBWFQ
B.   IntServ with RSVP
C.   DiffServ
D.   The IPsec VTI qos pre-classify command
E.   Q-in-Q

Answer: B

QUESTION 232
Which technology can be used to prevent flooding of IPv6 multicast traffic on a switch?

A.   IGMP snooping
B.   IGMP filtering

C. MLD snooping
D. MLD filtering

Answer: C

QUESTION 233
Which two statements about logging are true? (Choose two.)

A. Log messages are sent to the console port by default.
B. Log messages are displayed in a Telnet session by default.
C. Interface status changes are logged at the Notification level.
D. Interface status changes are logged at the Informational level.
E. System restart messages are logged at the Critical level.
F. Reload requests are logged at the Notification level.

Answer: AC
Explanation:
By default, switches send the output from system messages and debug privileged EXEC commands to a logging process. The logging process controls the distribution of logging messages to various destinations, such as the logging buffer, terminal lines, or a UNIX syslog server, depending on your configuration. The process also sends messages to the console.
The software generates four other categories of messages:
• Error messages about software or hardware malfunctions, displayed at levels warnings through emergencies. These types of messages mean that the functionality of the switch is affected. For information on how to recover from these malfunctions, see the system message guide for this release.
• Output from the debug commands, displayed at the debugging level. Debug commands are typically used only by the Technical Assistance Center.
• Interface up or down transitions and system restart messages, displayed at the notifications level. This message is only for information; switch functionality is not affected.
• Reload requests and low-process stack messages, displayed at the informational level. This message is only for information; switch functionality is not affected.
http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960/software/release/12-2_55_se/configuration/guide/scg_2960/swlog.html

QUESTION 234
Which two statements about asymmetric routing are true? (Choose two)

A. It can cause packet loss over stateful ICMP and UDP connections.
B. It can cause packet loss when a stateful firewall is in use.
C. It can cause TCP connections to close.
D. It can cause packet loss when NAT is in use.
E. It is uncommon in large networks.

Answer: BD

QUESTION 235
Which command can you use to redistribute IBGP routes into the IGP?

A. no synchronization
B. redistribute protocol process-number

C. bgp redistribute-internal
D. synchronization

Answer: C

QUESTION 236
Which option is the origin code when a route is redistributed into BGP?

A. IGP
B. EGP
C. external
D. incomplete
E. unknown

Answer: D

QUESTION 237
Which data plane protocol does EIGRP Over the Top use?

A. MPLS
B. GRE
C. LISP
D. IP-in-IP

Answer: C

QUESTION 238
Refer to the exhibit. Which kind of ICMPv6 packet is shown in the output?

```
⊟Ethernet II, Src: D-Link_ac:fe:56 (00:50:ba:ac:fe:56), Dst: IPv6-Neighbor-Discovery_ff:84:18:d9 (33:33:ff:84:18:d9)
   ⊟Destination: IPv6-Neighbor-Discovery_ff:84:18:d9 (33:33:ff:84:18:d9)
      Address: IPv6-Neighbor-Discovery_ff:84:18:d9 (33:33:ff:84:18:d9)
      .... ...1 .... .... .... .... = Multicast: This is a MULTICAST frame
      .... ..1. .... .... .... .... = Locally Administrated Address: This is NOT a factory default address
   ⊟Source: D-Link_ac:fe:56 (00:50:ba:ac:fe:56)
      Address: D-Link_ac:fe:56 (00:50:ba:ac:fe:56)
      .... ...0 .... .... .... .... = Multicast: This is a UNICAST frame
      .... ..0. .... .... .... .... = Locally Administrated Address: This is a FACTORY DEFAULT address
      Type: IPv6 (0x86dd)
⊟Internet Protocol Version 6
   Version: 6
   Traffic class: 0x00
   Flowlabel: 0x00000
   Payload length: 32
   Next header: ICMPv6 (0x3a)
   Hop limit: 255
   Source address: fe80::250:baff:feac:fe56
   Destination address: ff02::1:ff84:18d9
⊟Internet Control Message Protocol v6
   Type: 135
   Code: 0
   Checksum: 0xc92d [correct]
   Target: fe80::20e:cff:fe84:18d9
   ⊟ICMPv6 options
      Type: 1 (Source link-layer address)
      Length: 8 bytes (1)
      Link-layer address: 00:50:ba:ac:fe:56
```

A. neighbor advertisement
B. neighbor solicitation
C. router discovery

D. time exceeded
E. router advertisement

Answer: B

QUESTION 239
Which PIM mode can forward traffic by using only (*. G) routing table entries?

A. dense mode
B. sparse-dense mode
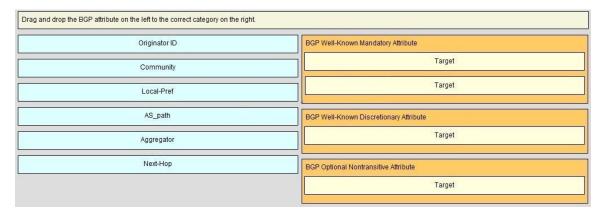C. sparse mode
D. bidrirectional mode

Answer: D

QUESTION 240
Which three factors does Cisco PfR use to calculate the best exit path? (Choose three.)

A. quality of service
B. packet size
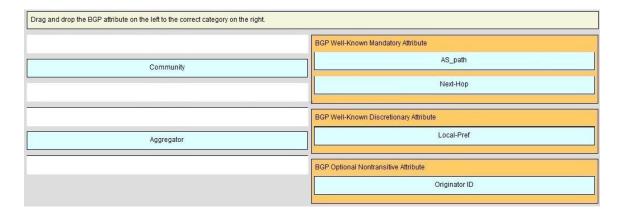C. delay
D. loss
E. reachability
F. administrative distance
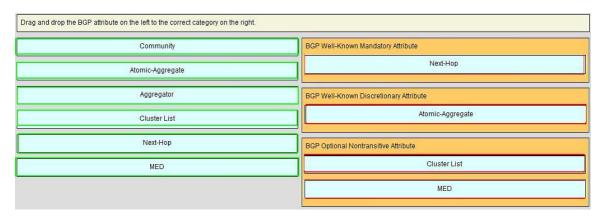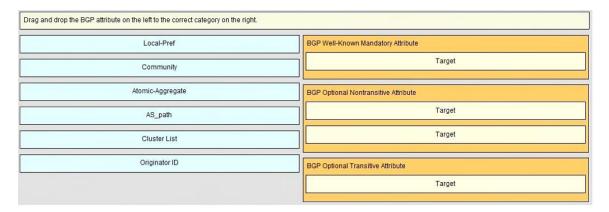
Answer: CDE

QUESTION 241
Drag and Drop Question

Drag and drop the BGP attribute on the left to the correct category on the right.	
Originator ID	**BGP Well-Known Mandatory Attribute**
Community	Target
Local-Pref	Target
AS_path	**BGP Well-Known Discretionary Attribute**
Aggregator	Target
Next-Hop	**BGP Optional Nontransitive Attribute**
	Target

Answer:

Drag and drop the BGP attribute on the left to the correct category on the right.

	BGP Well-Known Mandatory Attribute
	AS_path
Community	Next-Hop
	BGP Well-Known Discretionary Attribute
Aggregator	Local-Pref
	BGP Optional Nontransitive Attribute
	Originator ID

QUESTION 242
Drag and Drop Question
Drag and drop the BGP attributes on the left to the correct category on the right.

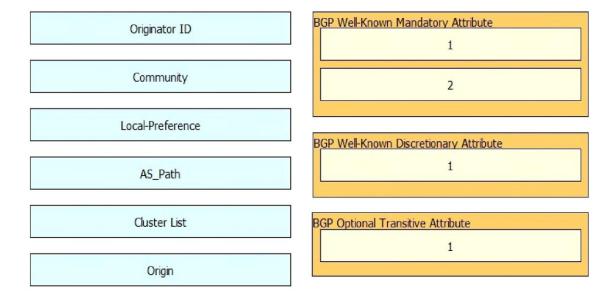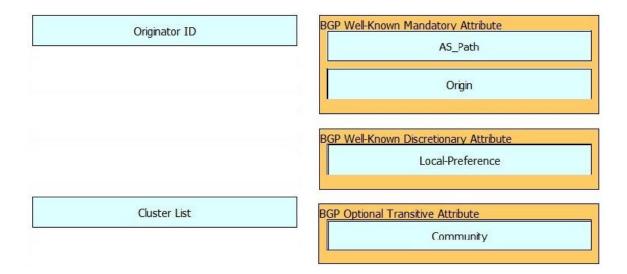Drag and drop the BGP attribute on the left to the correct category on the right.

	BGP Well-Known Mandatory Attribute
Community	Target
Atomic-Aggregate	
Aggregator	BGP Well-Known Discretionary Attribute
Cluster List	Target
Next-Hop	BGP Optional Nontransitive Attribute
MED	Target
	Target

Answer:

Drag and drop the BGP attribute on the left to the correct category on the right.

	BGP Well-Known Mandatory Attribute
Community	Next-Hop
Atomic-Aggregate	
Aggregator	BGP Well-Known Discretionary Attribute
Cluster List	Atomic-Aggregate
Next-Hop	BGP Optional Nontransitive Attribute
MED	Cluster List
	MED

QUESTION 243
Drag and Drop Question
Drag and drop the BGP attribute on the left to the correct category on the right.

Drag and drop the BGP attribute on the left to the correct category on the right.

Local-Pref		BGP Well-Known Mandatory Attribute
Community		Target
Atomic-Aggregate		BGP Optional Nontransitive Attribute
AS_path		Target
Cluster List		Target
Originator ID		BGP Optional Transitive Attribute
		Target

Answer:

Drag and drop the BGP attribute on the left to the correct category on the right.

Local-Pref		BGP Well-Known Mandatory Attribute
Community		AS_path
Atomic-Aggregate		BGP Optional Nontransitive Attribute
AS_path		Originator ID
Cluster List		Cluster List
Originator ID		BGP Optional Transitive Attribute
		Community

QUESTION 244
Drag and Drop Question
Drag and drop the BGP attribute on the left to the correct category on the right.

Originator ID		BGP Well-Known Mandatory Attribute
Community		1
Local-Preference		2
AS_Path		BGP Well-Known Discretionary Attribute
Cluster List		1
Origin		BGP Optional Transitive Attribute
		1

Answer:

Originator ID	BGP Well-Known Mandatory Attribute
	AS_Path
	Origin

| | BGP Well-Known Discretionary Attribute |
| | Local-Preference |

| Cluster List | BGP Optional Transitive Attribute |
| | Community |

QUESTION 245
Which type of port would have root guard enabled on it?

A. A root port
B. An alternate port
C. A blocked port
D. A designated port

Answer: D

QUESTION 246
How does MSTP maintain compatibility with RSTP?

A. The system ID of an RSTP BPDU is padded with extra bytes to match the format of an MSTP BPDU.
B. RSTP encodes region information from an MSTP BPDU into a single instance.
C. MSTP sends all spanning-tree information in one BPDU.
D. RSTP implements a TTL that is compatible with the MSTP max age timer.
E. MSTP supports five port states in the same way as RSTP.

Answer: C

QUESTION 247
Which statement about a type 4 LSA in OSPF is true?

A. It is an LSA that is originated by an ABR, that is flooded throughout the AS, and that describes a route to the ASBR.
B. It is an LSA that is originated by an ASBR, that is flooded throughout the AS, and that describes a route to the ASBR.
C. It is an LSA that is originated by an ASBR, that is flooded throughout the area, and that describes a route to the ASBR.

D. It is an LSA that is originated by an ABR, that is flooded throughout the AS, and that describes a route to the ABR.
E. It is an LSA that is originated by an ABR, that is flooded throughout the area, and that describes a route to the ASBR.

Answer: E

QUESTION 248
Which option describes how a router responds if LSA throttling is configured and it receives the identical LSA before the interval is set?

A. The LSA is added to the OSPF database and a notification is sent to the sending router to slow down its LSA packet updates.
B. The LSA is added to the OSPF database.
C. The LSA is ignored.
D. The LSA is ignored and a notification is sent to the sending router to slow down its LSA packet updates.

Answer: C

QUESTION 249
When you deploy DMVPN, what is the purpose of the command crypto isakmp key ciscotest address 0.0.0.0 0.0.0.0 ?

A. It is configured on hub and spoke router to establish peering
B. It is configured on hub to set the pre-shared key for the spoke routers
C. It is configured on the spokes to indicate the hub router
D. It is configured on the Internet PE routers to allow traffic to traverse the ISP core

Answer: B

QUESTION 250
Which statement is true about conditional advertisements?
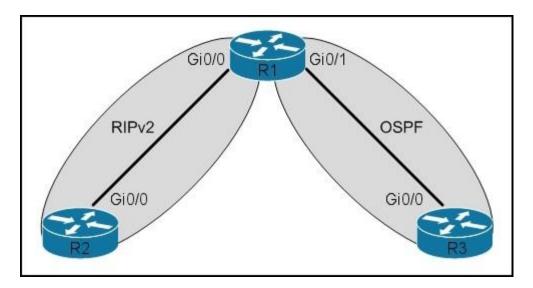
A. Conditional advertisements create routes when a predefined condition is met.
B. Conditional advertisements create routes when a predefined condition is not met.
C. Conditional advertisements delete routes when a predefined condition is met.
D. Conditional advertisements create routes and withhold them until a predefined condition is met.
E. Conditional advertisements do not create routes, they only withhold them until a predefined condition is met.

Answer: E

QUESTION 251
Refer to the exhibit. R1 is performing mutual redistribution, but OSPF routes from R3 are unable to reach R2. Which three options are possible reasons for this behavior? (Choose three.)

A. R1 requires a seed metric to redistribute RIP.
B. The RIP version supports only classful subnet masks.
C. R1 is filtering OSPF routes when redistributing into RIP.
D. R3 and R1 have the same router ID.
E. R1 and R3 have an MTU mismatch.
F. R2 is configured to offset OSPF routes with a metric of 16.

Answer: ACF

QUESTION 252
Which two statements about the client-identifier in a DHCP pool are true? (Choose two.)

A. It specifies a unique identifier that is used only for DHCP requests.
B. It is specified by appending 01 to the MAC address of a DHCP client.
C. It specifies a hardware address for the client.
D. It specifies a unique identifier that is used only for BOOTP requests.
E. It requires that you specify the hardware protocol.

Answer: AB

QUESTION 253
Drag and Drop Question
Drag and drop the NAT operations on the left into the correct sequential order on the right.
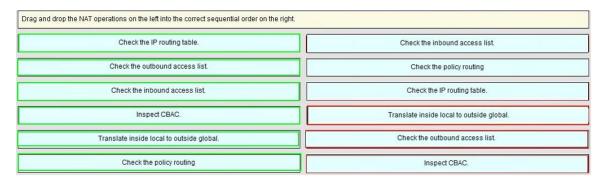
Drag and drop the NAT operations on the left into the correct sequential order on the right.

Check the IP routing table.	step 1
Check the outbound access list.	step 2
Check the inbound access list.	step 3
Inspect CBAC.	step 4
Translate inside local to outside global.	step 5
Check the policy routing	step 6

Answer:

Drag and drop the NAT operations on the left into the correct sequential order on the right.

Check the IP routing table.	Check the inbound access list.
Check the outbound access list.	Check the policy routing
Check the inbound access list.	Check the IP routing table.
Inspect CBAC.	Translate inside local to outside global.
Translate inside local to outside global.	Check the outbound access list.
Check the policy routing	Inspect CBAC.

QUESTION 254
Which TCP feature allows a client to request a specific packet that was lost?

A. flow control
B. sliding window
C. fast recovery
D. selective acknowledgment

Answer: D

QUESTION 255
Which three modes are valid for forming an EtherChannel between the ports of two switches? (Choose three.)

A. Active/active
B. Active/passive
C. Passive/passive
D. Auto/auto
E. Auto/desirable
F. Desirable/on

Answer: ABE

QUESTION 256
Which two statements about Cisco Express Forwarding are true? (Choose two.)

A. Cisco Express Forwarding tables contain reachability information and adjacency tables contain forwarding information.
B. Cisco Express Forwarding tables contain forwarding information and adjacency tables contain reachability information.
C. Changing MAC header rewrite strings requires cache validation.
D. Adjacency tables and Cisco Express Forwarding tables can be built separately.
E. Adjacency tables and Cisco Express Forwarding tables require packet process-switching.

Answer: AD

QUESTION 257
Drag and Drop Question
Drag and drop the EIGRP query condition on the left to the corresponding action taken by the router on the right.

The EIGRP table is missing an entry for the route	A feasible successor is installed in the routing table, and a reply
The EIGRP table lists the querying router as the successor for	The router replies with the successor information
The querying router is the successor, and no feasible successor exists	The router replies to the query with an unreachable message
the EIGRP table has a successor	The router send a query on all interfaces except the interface that had the successor route

Answer:

	The EIGRP table lists the querying router as the successor for
	the EIGRP table has a successor
	The EIGRP table is missing an entry for the route
	The querying router is the successor, and no feasible successor exists

QUESTION 258
Drag and Drop Question
Drag and drop the MPLS term on the left to the function it performs on the right.

label	instructs the router to keep the label when forwarding
implicit-null	groups IP packets so that they are given the same forwarding treatment
explicit-null	identifies the group to which an IP packet belongs
penultimate hop popping	instructs the penultimate router to pop the label before
FEC	identifies a layer 2 MPLS connection from one device to
virtual circuit	pops an MPLS label off one hop before its final destination

Answer:

	explicit-null
	FEC
	label
	implicit-null
	virtual circuit
	penultimate hop popping

QUESTION 259
Drag and Drop Question
Drag and drop each IPv6 neighbor discovery message type on the left to the corresponding description on the right.

---

neighbor redirect	The message a node uses to share its link-layer address
router solicitation	The message a node uses to notify hosts on the link of a better first-hop for a destination
router advertisement	The message a node uses to discover the link-local addresses of other nodes on the link
neighbor advertisement	The message a node uses to share information about its status and its local prefixes
neighbor solicitation	The message a host sends when it starts up, requesting local routers to transmit information

Answer:

neighbor redirect	neighbor advertisement
router solicitation	neighbor redirect
router advertisement	neighbor solicitation
neighbor advertisement	router advertisement
neighbor solicitation	router solicitation

QUESTION 260
Drag and Drop Question
Drag and drop each step of the Unicast RPF process on the left into the correct order on the right.

Unicast RPF performs a CEF table lookup for packet forwarding.	1
Unicast RPF performs a reverse lookup of the return path in	2
The packet is received on the interface.	3
The output ACL is checked on the forwarding interface.	4
The packet is forwarded.	5
The packet is checked against the inbound ACL.	6

Answer:

Unicast RPF performs a CEF table lookup for packet forwarding.	The packet is received on the interface.
Unicast RPF performs a reverse lookup of the return path in	The packet is checked against the inbound ACL.
The packet is received on the interface.	Unicast RPF performs a reverse lookup of the return path in
The output ACL is checked on the forwarding interface.	Unicast RPF performs a CEF table lookup for packet forwarding.
The packet is forwarded.	The output ACL is checked on the forwarding interface.
The packet is checked against the inbound ACL.	The packet is forwarded.

QUESTION 261
Drag and Drop Question
Drag each routing protocol on the left to the matching statement on the right.

BGP		Has low resource usage and can be configured to send either unicast or multicast updates.
IS-IS		Has high resource usage and requires the administrator to modify routing behavior to limit the information that is sent to non-backbone levels.
OSPF		Has high resource usage and supports a proprietary Cisco option to perform primary route calculation.
RIPv2		Has high resource usage and uses TLV to incorporate features.

Answer:

BGP	RIPv2
IS-IS	OSPF
OSPF	BGP
RIPv2	IS-IS

QUESTION 262
Drag and Drop Question
Drag and drop each BGP attribute on the left into the priority order in which the attributes are preferred when determining the best path on the right.

highest LOCAL_PREF	First
highest WEIGHT	Second
locally originated path	Third
lowest MED	Fourth
lowest origin type	Fifth
shortest AS_PATH	Sixth

Answer:

highest LOCAL_PREF	highest WEIGHT
highest WEIGHT	highest LOCAL_PREF
locally originated path	locally originated path
lowest MED	shortest AS_PATH
lowest origin type	lowest origin type
shortest AS_PATH	lowest MED

QUESTION 263
Drag and Drop Question
Drag each OSPFv2 SA parameter on the left to its corresponding description on the right

Answer:

QUESTION 264
Which two statements about IS-IS authentication are true? (Choose two.)

A. Level 2 LSPs transmit the password encrypted inside the IS-IS PDU.
B. Area and domain authentication must be configured together.
C. Passwords can be configured on a per-interface basis.
D. If LSP authentication is in use, unauthorized devices can form neighbor adiacencies.
E. Lever 1 LSPs use the domain password.

Answer: CD

QUESTION 265
Which three options are the main security features in SNMPv3? (Choose three)

A. authentication
B. MIB persistence
C. message integrity
D. authorization
E. encryption
F. accounting

Answer: ACE

QUESTION 266
Which two authentication mechanisms are supported by SNMPv3 ?(Choose two)

A. SHA
B. username without password
C. username and password

D. DES
E. a community string
F. 265-bit AES

Answer: AC

QUESTION 267
Which two hashing algorithms can be used when configuring SNMPv3? (Choose two.)

A. MD5
B. SHA-1
C. Blowfish
D. DES
E. AES
F. SSL

Answer: AB

QUESTION 268
Which two statements about the default SNMP configuration are true? (Choose two.)

A. The SNMP agent is enabled.
B. The SNMP trap receiver is configured.
C. All SNMP notification types are sent.
D. SNMPv1 is the default version.
E. SNMPv3 is the default version.

Answer: CD

QUESTION 269
Refer to the exhibit. Which authentication method can the device use as an altermate to the pre-shared key?


```
crypto isakmp policy 20
authentication pre-share
crypto isakmp key isakmp address 192.168.10.1
crypto ipsec transform-set esp-des esp-des esp-md5-hmac
crypto map myvpn 10 ipsec-isakmp
set peer 192.168.10.1
set transform-set esp-des
match address 20
```

A. clear-text
B. certificate

C. 802.1x
D. null

Answer: D

QUESTION 270
Which option is the task of an IGMP Snooping Quenier?

A. It facilitates populating the group membership tables on IGMP Snooping-enabled switches
B. It sends PIM-SM messages to all multicast routers
C. It can limit the number of multicast messages a host receives
D. It coordinates the election of a mapping agent

Answer: A

QUESTION 271
Which two actions can you take to prevent routes from becoming stuck in active?(Choose two)

A. Design the network so that it uses the lowest possible number of quenes
B. Manually increase the EIGRP metrics on interfaces connected to successors
C. Use port channeling to aggregate multiple EIGRP interfaces
D. Increase the EIGRP K values on low-bandwidth interfaces
E. Increase the time a router waits before it declares routes stuck in active
F. Increase the Hello timers on all EIGRP interfaces

Answer: AE

QUESTION 272
Refer to the exhibit.What are two effects of the given configuration?(Choose two)

```
track 1 interface Ethernet1/0 line-protocol
track 2 interface Ethernet1/1 line-protocol
track 3 interface Ethernet1/2 line-protocol
track 100 list threshold weight
    object 1 weight 15
    object 2 weight 20
    object 3 weight 30
    threshold weight down 10 up 30
```

A. The aggregate weight of track object 100 is set to 30
B. Track object 100 goes down if Ethernet1/2 goes down
C. Track object 100 goes down if all three interfaces go down
D. Track object 100 goes down if Ethernet 1/0 goes down
E. The aggregate weight of track object 100 is set to 40
F. Track object 100 stays up as long as both Ethernet 1/0 and Ethernet 1/1 are up

Answer: CF

QUESTION 273
Which two statements about MPLS label stack encoding are ture?(Choose two)

A. The TTL is significant only on the top label
B. When a device forwards a labeled packet,it must copy the TTL of the outgoing label to the top label
C. MPLS labels are encoded in little-endian format
D. When an MPLS label stack undergoes the swap operation,it swaps the top and bottom labels
E. When a device forwards a labeled packet,it must copy the TTL of the incoming label to the outgoing label

Answer: AC

QUESTION 274
Which statement is true about trunking?
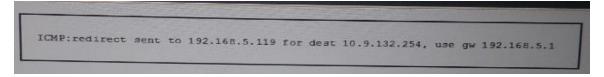
A. Cisco switches that run PVST+ do not transmit BPDUs on nonnative VLANs when using a dot1q trunk
B. DTP only supports autonegotiation on 802.1q and does not support autonegotiation for ISL
C. DTP is a point-to-point protocol
D. When removing VLAN 1 from a trunk,management traffic such as CDP is no longer passes in that VLAN

Answer: C

QUESTION 275
Refer to the exhibit. Which two conclusions can you draw from this output? (Choose two)

ICMP:redirect sent to 192.168.5.119 for dest 10.9.132.254, use gw 192.168.5.1

A. The packet was source-routed
B. The device that produced the output uses different interfaces to send and receive traffic to and from the device at 10.9.132.254
C. The device at the 192.168.5.119 routing tables has an ARP entry for the device at 10.9.132.254
D. The device that produced the output uses the same interface to send and receive traffic to and from the device at 10.9.132.254
E. The device at 192.168.5.119 is on the same subnet as the next hop for the device at 10.9.132.254

Answer: DE

QUESTION 276

Which command can you enter on an interface so that the interface will notify the sender of a packet that the path is sub-optimal?

A. ip nhrp set-unique-bit
B. ip nhrp shortcut
C. ip nhrp cost 65535
D. ip nhrp redirect
E. ip nhrp record

Answer: D

QUESTION 277
Refer to the exhibit. Which traffic gets set to AF41 by the making policy on interface GigabitEthernet0/0?

```
interface GigabitEthernet0/0
 description *** Site Backbone ***
 ip address 10.1.114.5 255.255.255.248
 service-policy input marking
!
policy-map marking
class in-voice
class in-streaming
  set ip dscp af41
 class in-time-sensitive
  set ip dscp af31
class class-default
  set ip dscp af21
!
class-map match-any in-streaming
 match access-group name streaming
 match access-group name tp-rooms
class-map match-any in-voice
 match access-group name voice
class-map match-any in-time-sensitive
 match access-group name time-sensitive
```

A. Only traffic matching access-list tp-rooms
B. Only traffic matching access-list streaming
C. No traffic gets set AF41
D. Any traffic matching access-list tp-rooms and access-list streaming

Answer: D

QUESTION 278
Which two options are required parts of an EEM policy?(Choose two)

A. exit status
B. event register keyword
C. entry status
D. namespace import
E. body

Answer: BE

QUESTION 279
Which option describes the characteristics of a public Infrastructure as a Service cloud service model?

A. It is a way of delivering cloud-computing infratructure (servers, storage, network, and operating systems) as an on-demand service
B. It is a cloud service where the underlying hardware is managed by the cloud service provider
C. It is a cloud-computing platform that facilitaes the creation of web applications without the need to maintain the supporting software application
D. It is a cloud-computing platform that facilitaes the creation of web applications without the need to maintain the supporting software operating systems

Answer: A

QUESTION 280
Which option is can example of SaaS?

A. Google Apps
B. Amazon AWs
C. Google App Engine
D. Microsoft Azure

Answer: A

QUESTION 281
Which two statements about static routing are ture?(Choose two)

A. It is highly scalable as networks grow
B. It reduces configuration errors
C. It can be implemented more quickly that dynamic routing
D. It provides better security than dynamic routing
E. It requires less bandwidth and fewer CPU cycles than dynamic routing protocols

Answer: DE

QUESTION 282
Which value does VPLS use to make forwarding decisions?

A. destination IP address of the packet
B. destination MAC of the Ethernet frame
C. source IP address of the packet

D. source MAC of the Ethernet frame

Answer: B

QUESTION 283
Which three configuration settings must match for switches to be in the same MST region?(Choose three)
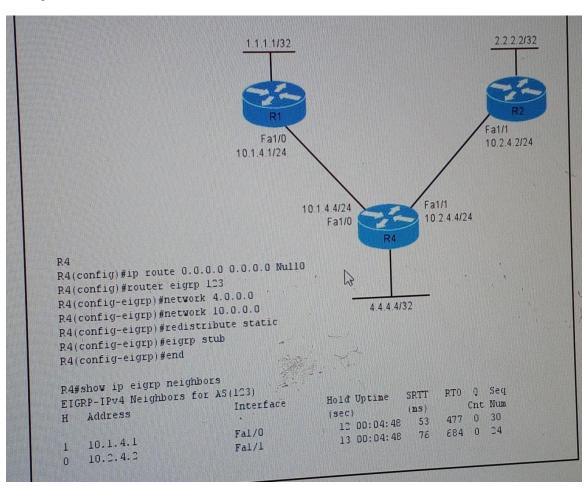
A. password
B. region name
C. VLAN-to-instance assignment
D. revision number
E. VLAN names
F. domain name

Answer: BCD

QUESTION 284
Refer to the exhibit. If R4 is configured as shown, which EIGRP routes are present in the R1 routing table?

A. 4.4.4.4/32 and 10.2.4.0/24 only
B. 4.4.4.4/32 and 10.1.4.0/24 only
C. 4.4.4.4/32,10.2.4.0/24,and 2.2.2.2/32
D. 0.0.0.0/0,4.4.4.4/32,and 10.2.4.0/24
E. 0.0.0.0/0 and 4.4.4.4/32 only

Answer: A

QUESTION 285
Which two statements about IPv6 multicast address are true? (Choose two)

A. An IPv6 host must join the solicited-node multicast group for every unicast and anycast
   address on the node
B. IPv6 routers update their routing tables when they receive a redirect message on a segment
C. Solicited-node multicast addresses are based on the lower-order 24 bits of the unicast or
   anycast address
D. They perform neighbor unreachability detection only for neighbors that send multicast packets
E. Neighbors respone to solicitation messages by sending Router Advertisement message
F. They use UDP packets to perform neighbor unreachability detection

Answer: AC

QUESTION 286
Which type of access list allows granular session filtering for upper-level protocols?

A. reflexive access lists
B. context-based access lists
C. content-based access lists
D. extended access lists

Answer: A

QUESTION 287
In which scenario can asymmetric routing occur?
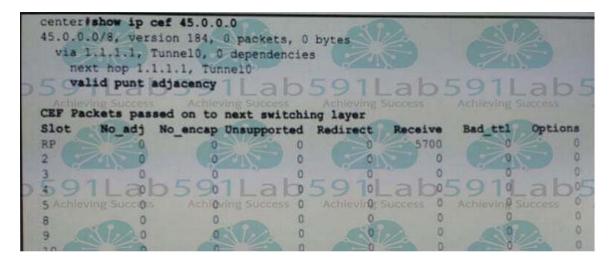
A. redundant routers running VRRP
B. active/standby firewall setup
C. active/active firewall setup
D. single path in and out of the network

Answer: C

QUESTION 288
Refer to the exhibit. What is indicated by the show ip cef command for an address?

```
center#show ip cef 45.0.0.0
45.0.0.0/8, version 184, 0 packets, 0 bytes
  via 1.1.1.1, Tunnel0, 0 dependencies
    next hop 1.1.1.1, Tunnel0
  valid punt adjacency

CEF Packets passed on to next switching layer
Slot    No_adj  No_encap Unsupported  Redirect  Receive  Bad_ttl  Options
RP        0        0         0           0        5700      0        0
2         0        0         0           0         0        0        0
3         0        0         0           0         0        0        0
4         0        0         0           0         0        0        0
5         0        0         0           0         0        0        0
8         0        0         0           0         0        0        0
9         0        0         0           0         0        0        0
10                           0                             0
```

A. CEF cannot switch packet for this route and drops it
B. CEF is unable to get routing information for this route
C. CEF cannot switch packet for this route and passes it to the next best switching method
D. A valid entry and is punted to hardware-based forwarding

Answer: C

QUESTION 289
Which two statements about Management Plane Protection are true?(Choose two)

A. It supports the SNMP,ssh,TFTP,and HTTP management protocols
B. It supports in-band and out-of-band management interfaces
C. It is enabled by default,but it allows all manangement protocols to pass freely through all interfaces until it is configured
D. It can handle management traffic when IP Cisco Express Forwarding is disabled
E. It provides granular control over the management protocols that are allowed on an interface
F. It works only on out-of-band management interfaces

Answer: AC

QUESTION 290
A network engineer enables OSPF on a Frame Relay WAN connection to various remote sites,but no OSPF adjacencies come up.Which two actions are possible solutions for this issue?(Choose two)

A. Change the network type to nonbroadcast multipoint access
B. Configure the neighbor command under OSPF process for each remote site
C. Ensure that the OSPF process number matches among all remote sites
D. Enable virtual links
E. Change the network type to point-to-multipoint under WAN interface

Answer: BE

QUESTION 291

Which two statements about route redistribution default metrics are true?(Choose two)

A. When an IGP is redistributed into RIP, it has a default metric of 1
B. When an IGP is redistributed into OSPF, it has a default metric of 110
C. When an IGP is redistributed into IS-IS, it has a default metric of 115
D. When EIGRP is redistributed into OSPF as E2, it has a default metric of 20
E. When BGP is redistributed into OSPF, it has a default metric of 1

Answer: DE

QUESTION 292
Which two GRE features can you configure to prevent fragmentation?(Choose two)

A. UDP window sizes
B. IP MTU
C. PMTUD
D. MTU ignore
E. TCP MSS
F. DF bit clear

Answer: CE

QUESTION 293
Which three statements about AToM are true?(Choose three)

A. The PE routers must share the same VC identifier
B. It requires Layer 3 routing between the PE and CE router
C. It requires MPLS between the PE routers
D. IP CEF should be disabled on the PE routers
E. It supports interworking for Frame Relay,PPP,and Ethernet,but not ATM
F. The attachment circuit is configured with the xconnect command

Answer: ACF

QUESTION 294
Refer to the exhibit. You are configuring Router 1 and Router 2 for L2TPv3 tunneling.
Which two additional configurations are required to enable Router 1 and Router 2 to establish the tunnel?(Choose two)

```
Router1#show run
Building configuration...

ip cef
no ip domain lookup

pseudowire-class R1toR2
    ip local interface Loopback0

interface Loopback0
    ip address 10.1.1.1 255.255.255.255

interface FastEthernet1/0
    no snmp trap link-status
    no cdp enable
    xconnect 10.10.12.1 12 pw-class R1toR2

end
```

A. Loopback 0 on Router 1 must be advertised to Router 2
B. An IP address must be configured on interface FastEthernet1/0 on Router 1
C. Cisco Disconvery Protocol must be enabled on interface FastEhternet1/0 on Router 1
D. Router 1 must be configured to encapsulate traffic by using L2TPv3 under the pseudowire-class R1toR2
E. Cisco Express Forwarding must be disabled on Router 1

Answer: AD

QUESTION 295
Which IPv4 feature can limit indiscriminate flooding of multicast traffic on a VLAN?
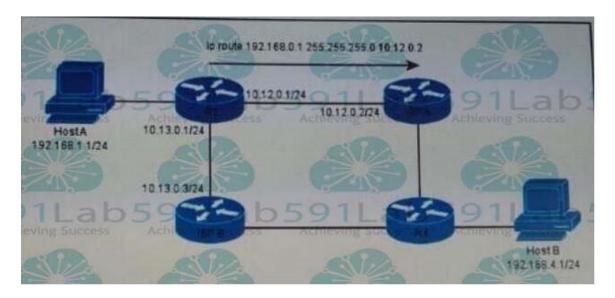
A. PIM Snooping
B. IGMP Snooping
C. MLD Filtering
D. IGMP Filtering

Answer: B

QUESTION 296
Refer to the exhibit. You have configured R1 to connect to two different ISPs.
Which Cisco IOS security feature can you configure on R1 to reduce the risk of malicious IP spoofing while allowing traffic from Host B to reach Host A through both ISPs?

A. uRPF strict mode
B. IP source guard
C. uRPF loose mode
D. port security

Answer: C

QUESTION 297
Which statement about Embedded Packet Capture is true?

A. A capture point can be associated with muitiple capture buffers
B. Capture data is stored in the router's NVRAM
C. Capture data is stored in the router's DRAM
D. It can capture unicast traffic only
E. The capture configuration is persistent when the router is restarted

Answer: C

QUESTION 298
Which ISAKMP feature can protect a GDOL from a hacker using a network sniffer while a security association is

A. an ISAKMP Phase 1 security association
B. an ISAKMP Phase 2 GROUPKEY-PULL exchange
C. a ISAKMP Phase 2 GROUPKEY-PUSH exchange
D. an ISAKMP Phase 2 security association
E. the Proof of Possession(POP)

Answer: A

QUESTION 299
Refer to the exhibit. Which Qos mechanism is in use to prioritize voice traffic?
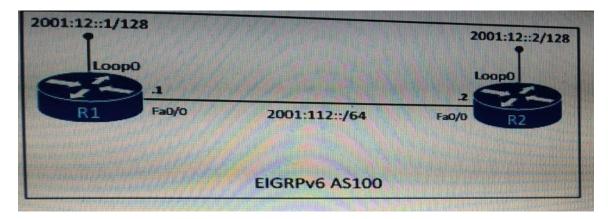
```
policy-map EGRESS-QUEUING
    class VOICE
        priority percent 20
    class VIDEO
        bandwidth remaining percent 60
    class DATABASE
        bandwidth remaining percent 20
    class class-default
        bandwidth remaining percent 10
        fair-queue
```

A. priority queuing
B. fair queuing
C. CBWFQ
D. low-latency queuing
E. custom queuing

Answer: D

QUESTION 300
Refer to the exhibit. Which EIGRP routes will appear in the routing table of R2?

A. 2001:12::1/64
B. 2001:112::/64.2001:12::1/128
C. 2001:112::/64.2001:12::1/64
D. 2001:12::1/128

Answer: D

QUESTION 301
Refer to the exhibit. What conclusion can you draw from the given ping output?

```
RDU#ping
Protocol [ip]:
Target IP address: 10.82.1.161
Repeat count [5]:
Datagram size [100]:
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface:  10.111.252.92
Type of service [0]:
Set DF bit in IP header? [no]: y
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]:
Sweep range of sizes [n]: y
Sweep min size [36]: 1400
Sweep max size [18024]: 1500
Sweep interval [1]:
Type escape sequence to abort.
Sending 505, [1400..1500]-byte ICMP Echos to 10.82.1.161, timeout is 2 seconds:
Packet sent with a source address of 10.111.252.92
Packet sent with the DF bit set
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!..!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!..!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!..!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!..!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!..!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
.M.M.M.M.M.M.M.M.
Success rate is 95 percent (480/505), round-trip min/avg/max = 16/68/1412 ms
```

A. The ping operation sent packets ranging from 505 to 1500 bytes in size
B. The Verbose option was set in the IP header
C. The packet life was exceeded in 5 percent of the oper ations
D. Fragmentation faited duting the ping operation

Answer: D

QUESTION 302
Refer to the exhibit. You notice that when interface F0/0 goes down.the device fails to install the floating static route to next hop 192.168.21.2 interface route table.
Which action can you take to correct the problem?

```
R1#show ip route
C    192.168.12.0/24 is directly connected, FastEthernet0/0
     172.17.0.0/32 is subnetted, 1 subnets
D       172.17.2.2 [90/409600] via 192.168.21.2, 00:04:30, FastEthernet0/1
                    [90/409600] via 192.168.12.2, 00:04:30, FastEthernet0/0
        172.18.0.0/32 is subnetted, 1 subnets
D       172.16.2.2 [90/409600] via 192.168.21.2, 00:04:30, FastEthernet0/1
                    [90/409600] via 192.168.12.2, 00:04:30, FastEthernet0/0
        172.18.0.0/32 is subnetted, 1 subnets
S       172.18.2.2 [1/0] via 192.168.12.2
C    192.168.21.0/24 is directly connected, FastEthernet0/1
D    10.0.0.0/8 [90/409600] via 192.168.21.2, 00:02:36, FastEthernet0/1
                 [90/409600] via 192.168.12.2, 00:02:36, FastEthernet0/0
D    192.168.0.0/16 [90/307200] via 192.168.21.2, 00:04:32, FastEthernet0/1
                     [90/307200] via 192.168.12.2, 00:04:32, FastEthernet0/0
R1# show run
ip route 172.18.2.2 255.255.255.255 192.168.12.2
ip route 172.18.2.2 255.255.255.255 192.168.21.2 100
```

A. Configure the primary route with an outgoing interface only
B. Configure the primary route with a next-hop address and an outgoing interface
C. Configure a summary route to the next hop router on interface F0/1
D. Configure a summary route to the next hop router on interface F0/0

Answer: B

QUESTION 303
Which two statements about static routing are true?(Choose twe)

A. It is highly scalable as networks grow
B. It requires less bandwidth and fewer CPU cycles than dunamic routing protocols
C. It reduces configuration errors
D. It can be implemented more quickly than dumamic routing
E. It provides better security than dynamic routing

Answer: BE

QUESTION 304
Refer to the exhibit. Which router will be used tou forward traffic to destinations unknown in the area?

```
R6#sh isis database
IS-IS Level-1 Link State Database:
LSPID                LSP Seq Num    LSP Checksum    LSP Holdtime      ATT/P/OL
R1.00-00             0x00000013     0x9EBA          1055              1/0/0
R2.00-00             0x00000004     0x51B9          432               0/0/0
R2.01-00             0x00000003     0xA4A2          601               0/0/0
R3.00-00             0x00000013     0xEE58          1063              0/0/1
R3.01-00             0x00000005     0x76BF          1061              0/0/0
R3.02-00             0x00000005     0x9F9E          1053              0/0/0
R4.00-00             0x0000000C     0x3807          1061              0/0/0
R4.02-00             0x00000003     0xEE48          419               0/0/0
R5.00-00             0x00000007     0x5C7F          1059              0/0/1
R6.00-00           * 0x0000000B     0x9F26          1060              0/0/0
R7.00-00             0x00000006     0xE332          203               0/0/0
```

A. R3
B. R5
C. R2
D. R4
E. R1
F. R6

Answer: E

QUESTION 305
Which feature must be enabled so that an IS-IS single topology can support IPv6 traffic?

A. old-style TLVs only
B. bot new-and old-style TLVS
C. adjacency checking
D. new-style TLVS only
E. extended metrics

Answer: E

QUESTION 306
Which technology allows a device to filter routes into and out of an MPLS VPN?

A. route distinguishers
B. route targets
C. LDP
D. CEF

Answer: B

QUESTION 307
Which IPv6 migrationg metod allows IPv4-only devices to communicate with IPv6-only dual?

A. dual stack
B. GRE tunnel
C. ISATAP tunnel

D. NAT64
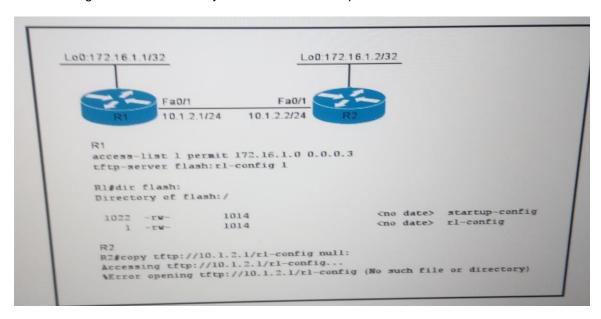
Answer: D

QUESTION 308
Refter to the exihibit. When R2 attempted to copy a file from the TFTP server, it received this error message. Which action can you take to correct the problem?

A. Change the access-list configuration on R1to access-list 1permit 17216.1.0 0.0.0.255
B. Configure the ip tftp source-interface Fa0/1 command on R1
C. Configure the ip tftp source-interface Fa0/1 command on R2
D. Configure the ip tftp source-interface Loopback0 command on R2
E. Configure the ip tftp source-interface Loopback0 command on R1

Answer: D

QUESTION 309
Which statement about Cisco Express Forwarding is true?

A. The FIB table resides on the route processor and the adjacency table resides on the line cards when Cisco Express Forwarding is enabled
B. The FIB table and the adjacency table reside on the line cards when Cisco Express Forwarding is enabled
C. Layer 2 next-hop address information is maintained in the FIB table
D. Layer 2 next-hop address information is maintained in the adjacency table

Answer: D

QUESTION 310
Which two statement about IGmp fitering are true?(Choose two)

A. It supports IGMPv3 traffic only
B. It allows Anycast RP to operate within a single AS
C. It can be implemented on Layer-3 routed ports using the ip igmp access-list command
D. It eliminates the need for a multicast RP
E. It can be implemented on Layer-2 swirchports using IGMP profiles

Answer: CE

QUESTION 311
For which two purposes can RTCP be used?(Choose two)
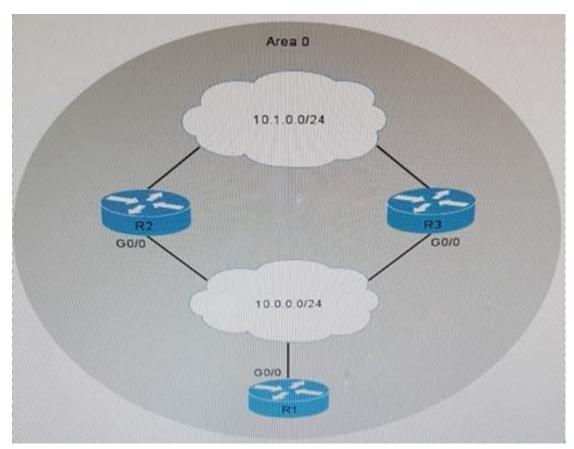
A. Authenticating RTP sessions
B. Providing encryption for RTP flows
C. Providing out-of-band statistics and control information for RTP session
D. Collecting information about VoIP service quality
E. Providing resource reservation service for VoIP traffic

Answer: CD

QUESTION 312
Refer to the exhibit. R1 has an OSPF path to R2 and R3 for 10.1.0.0/24, but R1 has a routing entry for 10.1.0.0/24 from only one router at a time. Which option is the most likely cause?

A. The R1 maximum path is set to 1.
B. R2 has a higher administrative distance.
C. R2 is using a filter list.
D. R2 is using an offset list.

Answer: A

QUESTION 313
Under which two circumstances is ipsec transport mode appropriate?(Choose two)

A. When both hosts are behind IPsec peers
B. When IPsec peers are the source and the destination of the traffic
C. When only one host is behind an IPsec peer
D. When the hosts are transmitting router management traffic
E. When only IPheader authentication is needed
F. When only IPheader encryption is needed

Answer: BD

QUESTION 314
Which two statements about BGP confederation architecture are true?(Choose two)

A. The ASN of a confederation is excluded from the AS_PATH path length calculation
B. IBGP sessions inside a sub-AS have a default TTL of 1
C. The intraconfederation EBGP default TTL value between sub-ASes is 1
D. The AS_SET and AS_SEQ components help prevent loops inside a sub-AS
E. The intraconfederation EBGP default TTL value between sub-ASes is 255

Answer: AC

QUESTION 315
Which value does VPLS use to make forwarding decisions?

A. destination IP address of the packet
B. destination MAC of the Ethernet frame
C. source IP address of packet
D. source MAC of the Ethernet frame

Answer: B

QUESTION 316
Which three configuration settings must match for switches to be in the same MST region?(Choose three)

A. password
B. region name
C. VLAN-to-instance assignment
D. revision number

E. VLAN names
F. domain name

Answer: BCD

QUESTION 317
Which difference between IGMP Snooping and PIM Snooping is true?

A. IGMP Snooping is a Cisco-proprietary technology, while PIM Snooping is standards-based
B. IGMP Snooping controls multicast traffic to hosts, while PIM Snooping controls multicast traffic
    to routers
C. IGMP Snooping replicates multicast traffic to multicast listeners, while PIM Snooping blocks
    multicast traffic from multicast listeners
D. IGMP Snooping allows traffic destined to 239.0.0.0/24 destination groups only, while PIM
    Snooping filters multicast traffic to all hosts

Answer: B

QUESTION 318
With PBR and set ip next-hop configured on an incoming interface, how does the router forward
the packet with the next-hop being unreachable?

A. The packet is forward using the normal routing table
B. The packet is policy routed
C. The next hop is added to the route table and the packet is policy routed
D. The packet is dropped

Answer: A

QUESTION 319
Refer to the exhibit. Which router on the given network generates the IS-IS pseudonode?

```
R1#sh isis database
IS-IS Level-1 Link State Database:
LSPID                    LSP Seq Num   LSP Checksum   LSP Holdtime      ATT/P/OL
R1.00-00               * 0x00000004    0x3632         937               0/0/0
R2.00-00                 0x00000004    0x5015         935               0/0/0
R2.01-00                 0x00000001    0xE90F         0 (901)           0/0/0
R3.00-00                 0x00000003    0x6CF6         935               0/0/0
R3.01-00                 0x00000001    0xE116         0 (937)           0/0/0
R4.00-00                 0x00000002    0x88D8         939               0/0/0
R4.01-00                 0x00000001    0x3BF3         938               0/0/0
IS-IS Level-2 Link State Database:
LSPID                    LSP Seq Num   LSP Checksum   LSP Holdtime      ATT/P/OL
R1.00-00               * 0x00000004    0x2B3D         941               0/0/0
R2.00-00                 0x00000004    0x4520         939               0/0/0
R2.01-00                 0x00000001    0xE90F         0 (901)           0/0/0
R3.00-00                 0x00000003    0x6102         939               0/0/0
R3.01-00                 0x00000001    0xE116         0 (935)           0/0/0
R4.00-00                 0x00000002    0x7DE3         937               0/0/0
R4.01-00                 0x00000001    0x0FA8         936               0/0/0
```

A. R4
B. R3
C. R1
D. R2

Answer: A

QUESTION 320
Which two statements about HDLC are true? (Choose two)

A. It is incompatible with full-duplex links
B. It resides on the network layer
C. It can insert and delete bits in the frame to prevent the delimiter flag's bit pattern from appearing within data fields
D. Its frames are non-synchronous
E. The physical layer clocks and synchronizes communication between links

Answer: CE

QUESTION 321
Refer to the exhibit. You notice that neighboring RIP IPv6 routers cannot reach OSPFv3 routes on R1.
Which reason for the problem is most likely true?

```
R1
interface Loopback0
ipv6 address 2001:DB8::1:1/128
ipv6 enable
ipv6 ospf 1 area 0

interface FastEthernet0/0
    ipv6 address 2001:DB8:12::1/64
    ipv6 rip process1 enable

ipv6 router rip process1
    redistribute ospf 1 metric 15
ipv6 router ospf 1
    router-id 1.1.1.1
```

A. The redistribute command under the OSPF process is missing
B. The IPv6 RIP process is missing a redistribution route map
C. The IPv6 process is missing an IPv6 RIP default metric
D. The redistribution metric is too large

Answer: D

QUESTION 322
Which two statements about SPAN and RSPAN are true? (Choose two)

A. Only RSPAN is limited to monitoring VLANs
B. Only RSPAN can monitor extended VLANs
C. Only RSPAN sends monitored traffic to a dedicated VLAN
D. Only SPAN is limited to monitoring switch ports
E. Only SPAN sends monitored traffic to a local physical port

Answer: CE

QUESTION 323
Refer to the exhibit.If neighbor 192.168.13.1 goes down,how does R1 handle traffic for the 192.168.100.0/24 route?

```
R1#sh ip eigrp top all
IP-EIGRP Topology Table for AS(100)/ID(192.168.13.1)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status
P 192.168.100.0/24, 1 successors, FD is 409600, serno 5
         via 192.168.13.3 (409600/128256), FastEthernet0/1
         via 192.168.12.2 (435200/409600), FastEthernet0/0
```
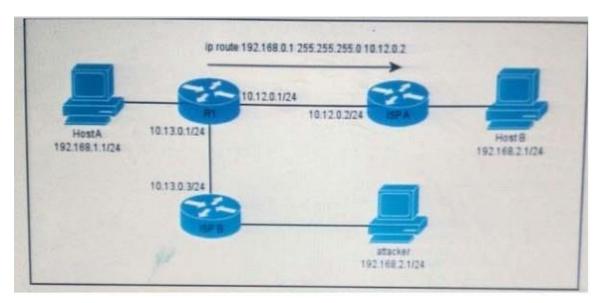
A. It removes the route without querying other neighbors
B. It uses the path through 192.168.12.2
C. It queries neighbor 192.168.12.2 only for an alternate route
D. It queries all neighbors for a new route

Answer: D

QUESTION 324
Refer to the exhibit. You have configured R1 to connect to two different ISPs.Which allows
remote users to access host A through both ISPs.
Which Cisco IOS security feature can you configure on R1 to drop requests from the attacker to
host A?

A. uRPF strict mode
B. port security
C. IP source guard
D. uRPF loose mode

Answer: D

QUESTION 325
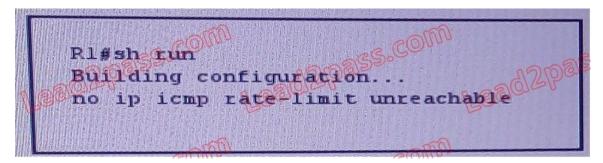
Which are three basic elements of Cisco Performance Monitor?(Choose three)

A. flow record
B. policy
C. SLA
D. border router
E. master controller
F. class

Answer: ABF

QUESTION 326
Refer to the exhibit. To which undesirable condition can router R1 be vulnerable?

A. Denial of service attacks
B. Unicast flooding
C. Man-in-the-middle attacks
D. Asymmetric routing
E. IP address spoofing

Answer: A
Explanation:
http://www.cisco.com/c/en/us/td/docs/ios/12_4t/12_4t2/hticmpun.html

QUESTION 327
If you configure EIGRP redistribution on a router without specifying metric values, how does the router respond?

A. It assigns the lowest possible metrics
B. It uses K values to assign new metrics
C. It fails to enter redistributed routes into route table
D. It uses the originating protocol metrics

Answer: C

QUESTION 328
Drag and Drop Question
Drag and drop each IPv6 tunneling mechanism from the left onto the correct characteristic on the right

6RD tunnel	It carries IPv6-only traffic between fixed endpoints.
6to4 tunnel	It treats the entire site as a single IPv6 network operated over an NBMA link.
GRE tunnel	It carries multiple types of tunneled traffic.
ISATAP tunnel	It carries IPv6 traffic to sites using the 2002::/16 prefix.
static ipv6ip tunnel	It carries IPv6 traffic to sites using a Service Provider's IPv4-derived IPv6 prefix.

Answer:

	static ipv6ip tunnel
	ISATAP tunnel
	GRE tunnel
	6to4 tunnel
	6RD tunnel

QUESTION 329
Two routers are connected on a PPP link using CHAP authentication by default which value will the routers use as their identification on the link?

A. Their hostnames
B. Their IP address on the connected link
C. Their interface numbers
D. Their serial numbers

Answer: A

QUESTION 330
Which component of a GETVPN deployment is responsible for obtaining an IPsec SA to encrypt data within a group?

A. Group member
B. Key Server
C. GDOI
D. GRE

Answer: C

QUESTION 331
Which PIM multicast type is designed to be used for many-to-many applications within individual PIM domains?
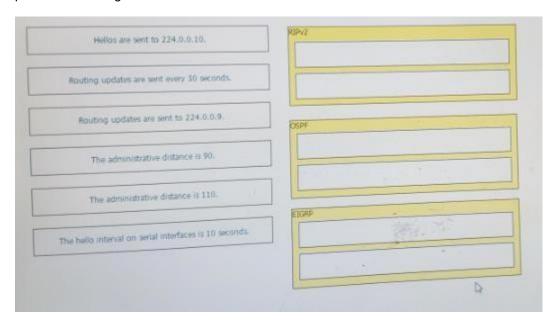
A. PIM-DM
B. Bidir-PIM
C. PIM-SM
D. SSM

Answer: B

QUESTION 332
Drag and Drop Question
Drag and Drop each statement about routing protocols from the left onto the correct routing protocol on the right.

Answer:

QUESTION 333
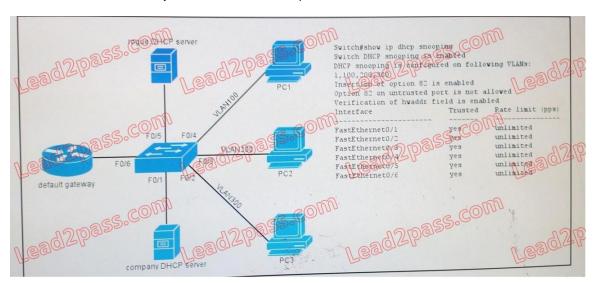
Refer to the exhibit. After you configured DHCP snooping to block a rouge DHCP server from assigning IP addresses to devices on your network you notice that all ports on the switch are still trusted. Which action can you take to correct the problem?

A. Disable DHCP snooping on all VLANs
B. Disable DHCP snooping on VLAN 1 only
C. Remove the ipdhcp snooping trust command from all interface on the switch except the interface that connects to the company DHCP server
D. Configure the ipdhcp snooping rate limited command to rate-limit the interface that connects to the rouge DHCP server

Answer: D

QUESTION 334
Which tunneling method can transmit IPv6 traffic over an MPLS infrastructure?

A. 6PE
B. 6to4
C. ISATAP
D. 6RD

Answer: A

QUESTION 335
Which IPv6 solution provides network information to clients without providing an IPv6 host address?

A. autoconfiguration
B. stateless DHCPv6
C. stateful DHCPv6
D. prefix delegation

Answer: A

QUESTION 336
Which two statements about PPP CHAP authentication are true? (Choose two)
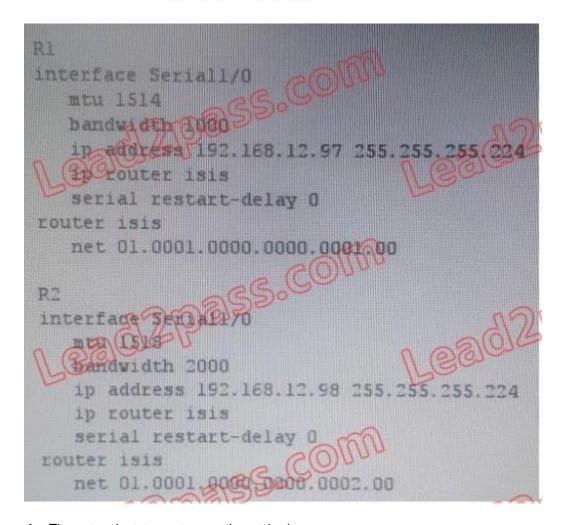
A. It is a one-way authentication method
B. It uses a secret password, which is sent across the link for authentication
C. It supports clear-text passwords
D. It is configurable only on PPP callout links
E. It uses a configured username and password to authenticate a host

Answer: AE

QUESTION 337
Refer to the exhibit. After you applied this configuration to R1 and R2, they failed to form an IS-IS adjacency. Which reason for the problem is most likely true?

```
R1
interface Serial1/0
    mtu 1514
    bandwidth 1000
    ip address 192.168.12.97 255.255.255.224
    ip router isis
    serial restart-delay 0
router isis
    net 01.0001.0000.0000.0001.00

R2
interface Serial1/0
    mtu 1515
    bandwidth 2000
    ip address 192.168.12.98 255.255.255.224
    ip router isis
    serial restart-delay 0
router isis
    net 01.0001.0000.0000.0002.00
```

A. The network statements are mismatched
B. The IP subnets are mismatched
C. The bandwidth is mismatched
D. The MTUs are mismatched

Answer: D

QUESTION 338
After you configure split horizon on an EIGRP hub-and-spoke network. You notice that some routes are missing on the spoke routers. Which two actions can you take to correct the problem? (Choose two)

A. Increase the Hello and Hold timers on the connections between the routers
B. Configure unicast neighbor statements on both the hub and the spokes
C. Disable split horizon on the spoke router interfaces only
D. Disable split horizon on the hub router interface only
E. Configure the summary address command on the hub router
F. Define a separate subinterface on the hub router for each spoke

Answer: DF
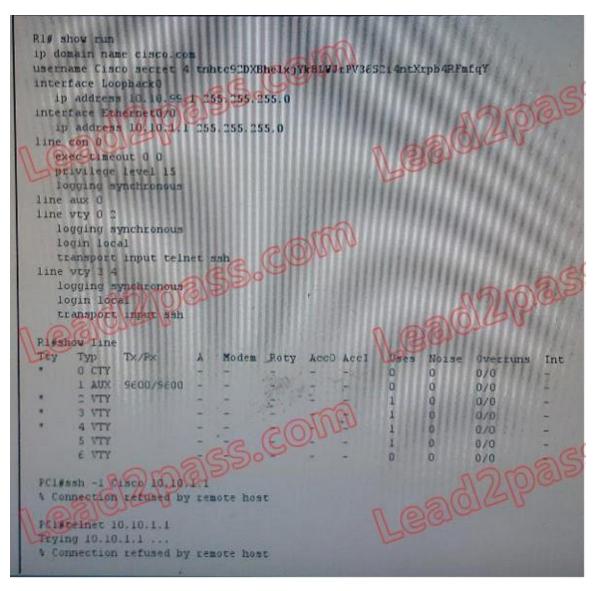
QUESTION 339
Which technology must be enabled on an interface before L2TPv3 can operate correctly?

A. OSPF
B. MPLS
C. CEF
D. STP

Answer: C

QUESTION 340
Refer to the exhibit. Which two possible reasons why the administrator is unable to log into the switch remotely are true? (Choose two)

```
R1# show run
ip domain name cisco.com
username Cisco secret 4 tnhtc92DXBhelxjYk8LWJrPV36S2i4ntXrpb4RFmfqY
interface Loopback0
   ip address 10.10.99.1 255.255.255.0
interface Ethernet0/0
   ip address 10.10.1.1 255.255.255.0
line con 0
   exec-timeout 0 0
   privilege level 15
   logging synchronous
line aux 0
line vty 0 2
   logging synchronous
   login local
   transport input telnet ssh
line vty 3 4
   logging synchronous
   login local
   transport input ssh

R1#show line
Tty   Typ   Tx/Rx       A  Modem  Roty  AccO AccI  Uses  Noise  Overruns  Int
 *    0 CTY              -   -            -    -     0     0      0/0       -
      1 AUX  9600/9600   -   -            -    -     0     0      0/0       -
 *    2 VTY              -   -            -    -     1     0      0/0       -
 *    3 VTY              -   -            -    -     1     0      0/0       -
 *    4 VTY              -   -            -    -     1     0      0/0       -
      5 VTY              -   -            -    -     1     0      0/0       -
      6 VTY              -   -            -    -     0     0      0/0       -

PC1#ssh -l Cisco 10.10.1.1
% Connection refused by remote host

PC1#telnet 10.10.1.1
Trying 10.10.1.1 ...
% Connection refused by remote host
```

A. An ACL is configured to reject connections from PC1

B. The user is using the incorrect username
C. SSH is disabled
D. The Telnet VTY lines are busy
E. The Baud rate is misconfigured

Answer: CD

QUESTION 341
Refer to the exhibit. Routers A and B are the edge devices at two different sites such as shown. The two edge devices use public addresses on their WAN interfaces and the both sites use RFC 1918 for all other addresses. If routers A and B have established an IPsec tunnel, which statement about the network environment must be true?

A. Router A1 and router B1 are using NAT translation to allow private-address traffic to traverse the tunnel
B. Router A and router B are using BGP to share routes between the two sites
C. The tunnel terminates on the ISP routes
D. Each site is capable of routing private addressing over the IPsec tunnel

Answer: D

QUESTION 342
Which STP feature can protect the network environment from loops in case of software failure?

A. Root Guard
B. BPDU Guard
C. Bridge Assurance
D. PortFast

Answer: C
Explanation:
http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SY/configuration/guide/sy_swcg/spanning_tree_features.html#79584
You can use Bridge Assurance to protect against certain problems that can cause bridging loops in the network. Specifically, you use Bridge Assurance to protect against a unidirectional link failure or other software failure and a device that continues to forward data traffic when it is no longer running the spanning tree algorithm.
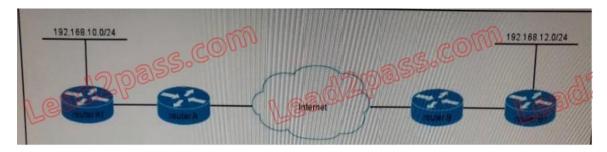
QUESTION 343
Refer to the exhibit. Routers A and B are the edge devices at two different sites as shown.
If routers A and B have established an IPsec tunnel, which two statements about the network

environment must be true? (Choose two)
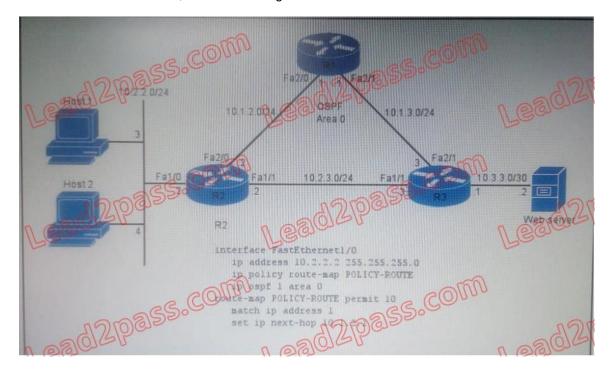
A. The connection could have been authenticated with 802.1x
B. The connection could have authenticated with a pre-shared key
C. RFC 1918 addresses are in use on the WAN interfaces on router A and router B
D. The connection could have been authenticated with MD5
E. Public IP addresses are in use on the WAN interfaces on router A and router B

Answer: BE

QUESTION 344
Refer to the exhibit, multiple hosts on the 10.2.2.0/24 network are sending traffic to the web server, Which configuration can you apply to R2 so that traffic from host 1 uses the path R2-R1-R3 to reach the web server, without affecting other hosts?

A. access-list 1 permit 10.2.2.0 0.0.0.255
B. interface FastEthernet2/0 ip policy route-map POLICY-ROUTE
C. access-list 1 permit 10.2.2.3 255.255.255.255
D. access-list 1 permit 10.2.2.3 0.0.0.0
E. access-list 1 permit 10.2.2.4 0.0.0.0

F. ip local policy route-map POLICY-ROUTE

Answer: D

QUESTION 345
A floating static route pointing to an interface appears in the routing table even when the interface is down. Which action can you take to correct the problem?

A. Correct the DHCP-provided route on the DHCP server
B. Remove the permanent option form the static route
C. Correct the administrative distance
D. Configure the floating static route to point to another route in the routing table

Answer: B

QUESTION 346
When multiple AAA authentication methods are specified in a method list and all working normally, how is the user authenticated?

A. The user is authenticated against all provided authentication sources and granted the most restricted set of access privileges
B. The user is authenticated against the first listed authentication source only
C. The user is authenticated against the provided authentication sources in order until a match is found
D. The user is authenticated against all provided authentication sources and granted the least restricted set of access privileges

Answer: B

QUESTION 347
Which feature must be enabled prior to enabling the IGMP Snooping Querier?

A. PIM-SM
B. SSM
C. IP helper
D. IGMP Snooping

Answer: D

QUESTION 348
Which protocol enables routers in an MPLS environment to use labels to move traffic?

A. FTP
B. POP
C. LLDP
D. PPP
E. L2TP
F. LDP

Answer: F

QUESTION 349
Which PIM feature allows the same multicast group address to be reused in different administrative domains?

A. Proxy Registering
B. IP Multicast Helper
C. IP Multicast Boundary
D. CGMP

Answer: C
Explanation:
http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipmulti_pim/configuration/12-4t/imc-pim-12-4t-book/imc_basic_cfg.html

QUESTION 350
Which two IP packet types always traverse to the route processor CPU? (Choose two)

A. Data-plane packets
B. Forwarding-plane packets
C. Control-plane packets
D. Services-plane packets
E. Management-plane packets

Answer: CE

QUESTION 351
Which route types are redistributed from OSPF into BGP by default?

A. All route types
B. External routes only
C. Inter-area routes only
D. Intra-area routes only
E. Intra-area routes and inter-area routes

Answer: E

QUESTION 352
Which feature forces a new Diffie-Hellman key exchange each time data is transmitted over a IPsec tunnel?

A. PFS
B. rsa-encr authentication
C. rsa-sig authentication
D. 802.1x
E. CRACK authentication

Answer: A

QUESTION 353
Refer to the exhibit. Which device role could have generated this debug output?

```
NHRP: Send Registration Request via Tunnel1 vrf 0, packet size: 108
    src: 172.30.10.66, dst: 172.30.10.1
    (F) afn: AF_IP(1), type: IP(800), hop: 255, ver: 1
        shtl: 4(NSAP), sstl: 0(NSAP)
        pktsz: 108 extoff: 52
    (M) flags: "unique nat ", reqid: 113922
        src NBMA: 10.100.100.193
        src protocol: 172.30.10.66, dst protocol: 172.30.10.1
    (C-1) code: no error(0)
        prefix: 32, mtu: 17912, hd_time: 600
        addr_len: 0(NSAP), subaddr_len: 0(NSAP), proto_len: 0, pref: 0
NHRP: Receive Registration Reply via
        addr_len: 0(NSAP), subaddr_len: 0(NSAP), proto_len: 0, pref: 0
```

A. an NHS only
B. an NHC only
C. an NHS or an NHC
D. a DMVPN hub router

Answer: B

QUESTION 354
Which statement about the NHRP network ID is true?

A. It is sent from the spoke to the hub to identify the spoke as a member of the same NHRP domain.
B. It is sent from the hub to the spoke to identify the hub as a member of the same NHRP domain.
C. It is sent between spokes to identify the spokes as members of the same NHRP domain.
D. It is a locally significant ID used to define the NHRP domain for an interface.

Answer: D

QUESTION 355
You are configuring a DMVPN spoke to use IPsec over a physical interface that is located within a VRF. For which three configuration sections must you specify the VRF name? (Choose three.)

A. the ISAKMP profile
B. the crypto keyring
C. the IPsec profile
D. the IPsec transform set
E. the tunnel interface
F. the physical interface

Answer: BEF

QUESTION 356
Which IPv6 prefix is used for 6to4 tunnel addresses?

A. 2001. . /23
B. 2002. . /16
C. 3ffe. . /16
D. 5f00. . /8
E. 2001. . /32

Answer: B

QUESTION 357
When you configure the ip pmtu command under an L2TPv3 pseudowire class, which two things can happen when a packet exceeds the L2TP path MTU? (Choose two.)

A. The router drops the packet.
B. The router always fragments the packet after L2TP/IP encapsulation.
C. The router drops the packet and sends an ICMP unreachable message back to the sender only if the DF bit is set to 1.
D. The router always fragments the packet before L2TP/IP encapsulation.
E. The router fragments the packet after L2TP/IP encapsulation only if the DF bit is set to 0.
F. The router fragments the packet before L2TP/IP encapsulation only if the DF bit is set to 0.

Answer: CF

QUESTION 358
Which two parameters does the Tunnel Mode Auto Selection feature select automatically?
(Choose two.)

A. the tunneling protocol
B. the transport protocol
C. the ISAKMP profile
D. the transform-set
E. the tunnel peer

Answer: AB

QUESTION 359
By default, how does a GET VPN group member router handle traffic when it is unable to register to a key server?

A. All traffic is queued until registration is successful or the queue is full.
B. All traffic is forwarded through the router unencrypted.
C. All traffic is forwarded through the router encrypted.
D. All traffic through the router is dropped.

Answer: B

QUESTION 360

Which two protocols are not protected in an edge router by using control plane policing? (Choose two.)

A. SMTP
B. RPC
C. SSH
D. Telnet

Answer: AB

QUESTION 361
Which two statements are true about AAA? (Choose two.)

A. AAA can use RADIUS, TACACS+, or Windows AD to authenticate users.
B. If RADIUS is the only method configured in AAA, and the server becomes unreachable, the user will be able to log in to the router using a local username and password.
C. If the local keyword is not included and the AAA server does not respond, then authorization will never be possible and the connection will fail.
D. AAA can be used to authenticate the enable password with a AAA server.

Answer: CD

QUESTION 362
Which three types of traffic are allowed by IEEE 802.1X access control prior to getting authenticated? (Choose three.)

A. EAPOL
B. VTP
C. STP
D. ARP
E. CDP
F. HTTP

Answer: ACE

QUESTION 363
Which two statements about MAC ACLs are true? (Choose two.)

A. They support only inbound filtering.
B. They support both inbound and outbound filtering.
C. They are configured with the command mac access-list standard.
D. They can filter non-IP traffic on a VLAN and on a physical interface.

Answer: AD

QUESTION 364
Refer to the exhibit. What happens to packets when traffic in the icmp-class class exceeds the policed amount?

```
Router#sh policy-map control-plane
    Control Plane

        Service-policy output: control-plane-out

            Class-map: icmp-class (match-all)
                197314985 packets, 11510114428 bytes
                5 minute offered rate 1000 bps, drop rate 0000 bps
                Match: access-group name killicmpv2
                police:
                        cir 1000000 bps, bc 31250 bytes
                    conformed 197138885 packets, 11499818077 bytes; actions:
                        transmit
                    exceeded 176100 packets, 10296351 bytes; actions:
                        drop
                    conformed 1000 bps, exceed 0000 bps

            Class-map: class-default (match-any)
                1126224901 packets, 158790413979 bytes
                5 minute offered rate 41000 bps, drop rate 0000 bps
                Match: any
```

A. Packets are discarded and a message is logged.
B. Packets are discarded and a trap is sent to any servers that are configured to receive traps.
C. Packets are discarded silently.
D. Packets are discarded and an inform is sent to any servers that are configured to receive informs.

Answer: C

QUESTION 365
Which statement describes Cisco PfR link groups?

A. Link groups enable Cisco PfR Fast Reroute when NetFlow is enabled on the external interfaces of the border routers.
B. Link groups define a strict or loose hop-by-hop path preference.
C. Link groups are required only when Cisco PfR is configured to load-balance all traffic.
D. Link groups are enabled automatically when Cisco PfR is in Fast Reroute mode.
E. Link groups set a preference for primary and fallback (backup) external exit interfaces.

Answer: E

QUESTION 366
Which two statements about NetFlow are true? (Choose two.)

A. It must be configured on each router in a network.
B. It supports ATM LAN emulation.
C. The existing network is unaware that NetFlow is running.
D. It uses SIP to establish sessions between neighbors.
E. It provides resource utilization accounting.

Answer: CE

QUESTION 367
You are installing a new device to replace a device that failed. The configuration of the failed device is stored on a networked server, and the new device has an RXBOOT image installed. Under which condition does the streamlined Setup mode fail?

A. The last four bits of the configuration register are not equal to the decimal value 0 or 1.
B. The startup configuration file was deleted.
C. Bit 6 is set in the configuration register.
D. The startup configuration is corrupt.

Answer: A

QUESTION 368
Which option is the Cisco recommended method to secure access to the console port?

A. Configure the activation-character command.
B. Configure a very short timeout (less than 100 milliseconds) for the port.
C. Set the privilege level to a value less than 15.
D. Configure an ACL.

Answer: A

QUESTION 369
Refer to the exhibit. If the network switch is configured as shown, which two statements about network traffic are true? (Choose two.)

```
class-map match-any voice
match dscp ef
class-map match-any router
match dscp cs6
class-map match-any gold
match dscp af41
class-map match-any silver
match dscp af31

policy-map egress_queue
class voice
priority percent 25
class gold
bandwidth percent 40
class silver
bandwidth percent 15
class router
bandwidth percent 5
class class-default
bandwidth percent remaining

policy-map egress_queue_2
class class-default
shape average 6000000
service-policy egress_queue

interface GigabitEthernet0/1
service-policy output egress_queue_2
```
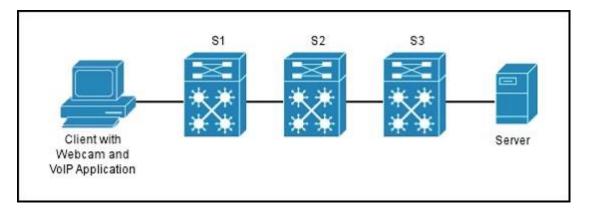
A. Traffic enters the shaper on a FIFO basis.
B. Traffic enters the shaper on a weighted fair queueing basis.
C. Drop behavior is random for traffic in excess of 6 Mbps.
D. Voice traffic is given priority until it reaches 1.5 Mbps.
E. Voice traffic is given priority until it reaches 6 Mbps.

Answer: AD

QUESTION 370
Refer to the exhibit. You are configuring the S1 switch for the switchport connecting to the client
computer. Which option describes the effect of the command mls qos map cos-dscp 0 8 16 24 32
40 46 56?

A. Voice traffic is excluded from the default priority queue.
B. Voice packets are given a class selector of 5.
C. Video conferencing is marked CS3.
D. Voice packets are processed in the priority queue.

Answer: A

QUESTION 371
Which two options are two characteristics of the HSRPv6 protocol? (Choose two.)

A. It uses virtual MAC addresses 0005.73a0.0000 through 0005.73a0.0fff.
B. It uses UDP port number 2029.
C. It uses virtual MAC addresses 0005.73a0.0000 through 0005.73a0.ffff.
D. It uses UDP port number 2920.
E. If a link local IPv6 address is used, it must have a prefix.

Answer: AB

QUESTION 372
Which statement about VRRP is true?

A. It supports load balancing.
B. It can be configured with HSRP on a switch or switch stack.
C. It supports IPv4 and IPv6.
D. It supports encrypted authentication.

Answer: B

QUESTION 373
Refer to the exhibit. What is the polling frequency set by this configuration?

```
ip sla monitor 10
    type echo protocol ipIcmpEcho 10.1.1.1 source-ipaddr 10.1.1.2
    frequency 60

ip sla monitor schedule 10 life 360
```

A. 60 seconds
B. 10 seconds
C. 360 seconds
D. 60 milliseconds
E. 10 milliseconds

Answer: A

QUESTION 374
Refer to the exhibit. Which additional information must you specify in this configuration to capture NetFlow traffic?

```
configure terminal
    interface Ethernet 0/0
    ip address 10.1.1.2 255.255.255.0
ip flow-export destination 10.1.1.1
```

A. ingress or egress traffic
B. the number of cache entries
C. the flow cache active timeout
D. the flow cache inactive timeout

Answer: A

QUESTION 375
For which three routing protocols can Cisco PfR provide direct route control? (Choose three.)

A. OSPF
B. ISIS
C. BGP
D. EIGRP
E. static routing
F. ODR

Answer: CDE

QUESTION 376
Refer to the exhibit. When would the EEM applet be triggered?

```
event manager applet MONITOR
 event interface name FastEthernet0/0 parameter receive_rate_pps entry-op ge entry-val
 10000 entry-type value exit-op le exit-val 1000 exit-type value poll-interval 5
```

A. every time that the input packet per second counter is below 10,000
B. every time that the input packet per second counter has increased by 1,000
C. every time that the input packet per second counter is above 10,000
D. every time that the input packet per second counter has decreased by 1,000

Answer: C

QUESTION 377
Refer to the exhibit. Based on the above commands, when will the output of the show log command be saved?

```
process cpu threshold type total rising 80 interval 5 falling 50 interval 5
event manager applet CCIE
event syslog pattern "SYS-1-CPUFALLINGTHRESHOLD"
action 1.1 cli command "enable"
action 1.2 cli command "show log | a flash:LOG"
```

A. Each time the total CPU utilization goes below 50 percent
B. Each time the total CPU utilization goes above 80 percent
C. Every 5 minutes while the total CPU utilization is above 80 percent
D. Every 5 seconds while the total CPU utilization is above 80 percent
E. Every 5 minutes while the total CPU utilization is below 50 percent
F. Every 5 seconds while the total CPU utilization is below 50 percent

Answer: A
Explanation:
he cpu threshold generates syslog messages when it goes above 80 % and when it comes back down below 50% after being above 80%.
It checks cpu utilization every 5 seconds.
When the cpu has been above 80%, and has come back below 50%, the syslog message SYS-1-CPUFALLINGTHRESHOLD is generated
-thats when the "show log" command is triggered
The closest answer is "Each time the total CPU goes below 50 percent"

QUESTION 378
Refer to the exhibit. Which of the following options will trigger the applet?

```
event manager applet SCRIPT
  event none
```

A. an external Cisco IOS event
B. a manually run policy event
C. a preconfigured timer
D. an automated RPC call

Answer: B
Explanation:
There are two ways to manually run an EEM policy. EEM usually schedules and runs policies on the basis of an event specification that is contained within the policy itself. The event none command allows EEM to identify an EEM policy that can either be run manually or be run when an EEM applet is triggered. To run the policy, use either the action policy command in applet configuration mode or the event manager run command in global configuration mode.

QUESTION 379
In GLBP, which router will answer on client ARP requests?

A. all active AVF routers as the first response is used by the client
B. the AVG router, replying with a different AVF MAC address each time
C. a random AVF router, based on a GLBP seed hash key
D. only the AVG router that received the ARP request first

Answer: B
Explanation:
LBP Active Virtual Gateway
Members of a GLBP group elect one gateway to be the active virtual gateway (AVG) for that group. Other group members provide backup for the AVG in the event that the AVG becomes unavailable. The AVG assigns a virtual MAC address to each member of the GLBP group. Each gateway assumes responsibility for forwarding packets sent to the virtual MAC address assigned to it by the AVG. These gateways are known as active virtual forwarders (AVFs) for their virtual MAC address. The AVG is responsible for answering Address Resolution Protocol (ARP) requests for the virtual IP address.
Load sharing is achieved by the AVG replying to the ARP requests with different virtual MAC addresses.
http://www.cisco.com/en/US/docs/ios/12_2t/12_2t15/feature/guide/ft_glbp.html#wp1039649

QUESTION 380
Refer to the exhibit. What is true about traffic from the INSIDE zone to the OUTSIDE zone?

```
!
class-map type inspect match-all CMAP_ICMP
 match protocol icmp
!
policy-map type inspect PMAP_A_B
 class type inspect CMAP_ICMP
  inspect
 class class-default
  drop
!
zone security INSIDE
zone security OUTSIDE
zone-pair security A_B source INSIDE destination OUTSIDE
 service-policy type inspect PMAP_A_B
!
interface FastEthernet0/0
 ip address 10.48.67.125 255.255.254.0
 zone-member security OUTSIDE
 duplex auto
 speed auto
 !
!
interface FastEthernet0/1
 ip address 192.168.101.1 255.255.255.0
 zone-member security INSIDE
 duplex auto
 speed auto
 !
!
```

A. All icmp echo requests will be inspected.
B. All IP traffic will be dropped.
C. All icmp echo requests will be passed, but the icmp echo reply to the echo request from the OUTSIDE zone will be dropped. /..l
D. All IP traffic will be inspected.

Answer: A
Explanation:
When the traffic moves from inside to outside zone, ICMP echo requests will be inspected because the inspection is set using policy-map-type command is used.

QUESTION 381
What is also called Type 0 authentication in OSPF on Cisco Routers?

A. MD5
B. There is no Type 0 authentication
C. SHA1
D. Null

Answer: D
Explanation:
These are the three different types of authentication supported by OSPF. Null Authentication-- This is also called Type 0 and it means no authentication information is included in the packet header. It is the default.
Plain Text Authentication--This is also called Type 1 and it uses simple clear-text passwords.
MD5 Authentication--This is also called Type 2 and it uses MD5 cryptographic passwords.

QUESTION 382
Refer to the exhibit. Which two statements are correct, when the QoS configuration is applied in an outbound direction on a 10-Mb/s interface? (Choose two.)

```
Class-map VIDEO
Match ip precedence 5
Class-map FTP
Match ip precedence 1

policy-map TEST
  class VIDEO
    priority 200
  class FTP
    bandwidth 1000
class class-default
  random-detect
```

A. When reaching 10 Mb/s of input rate, the video class will be policed to 200 kb/s.
B. The class FTP is allowed to reach more than 1 Mb/s in the event of congestion.
C. IP precedence 1 traffic is affected by a drop probability.
D. Video traffic above 200 kb/s is allowed to pass when the total interface output rate does not reach 10 Mb/s.
E. Video traffic above 200 kb/s is allowed to pass when congestion is present.

Answer: BD
Explanation:
http://www.cisco.com/en/US/docs/security/asa/asa82/configuration/guide/intrface.html
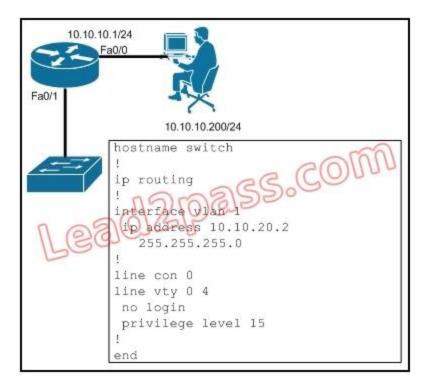
QUESTION 383
Refer to the exhibit. A user with IP address 10.10.10.200 fails to use Telnet to a switch with IP address 10.10.20.2.
What is most likely the issue?

A. The switch is not configured with a default gateway.
B. The HTTP server is not enabled on the switch.
C. STP is blocking the connection from switch to router.
D. IP routing is enabled on the switch, but no route pointing back to the client is configured.
E. The switch is configured with an IP address from the wrong subnet.
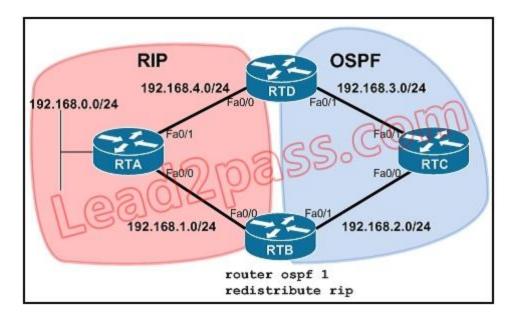
Answer: D
Explanation:
As you can see in the exhibit that IP routing is enabled on the switch but no route is pointing back to the client. The ip address of interface vlan 1 is given but after that nothing!

QUESTION 384
Refer to the exhibit. Router RTB is performing one-way redistribution from RIP to OSPF. Which outgoing interface will router RTD choose for packets to the 192.168.0.0/24 network, and why?
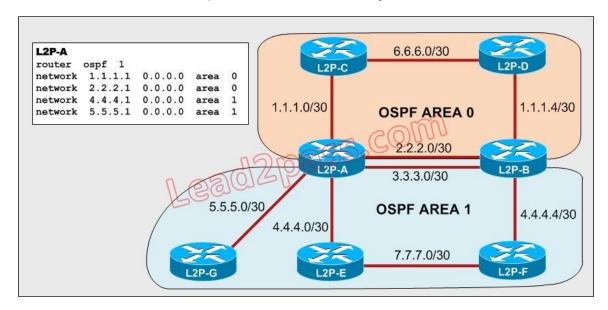
A. Fa0/1, because OSPF is a link-state routing protocol
B. Fa0/0, because RIP is a distance vector protocol
C. Fa0/0, because RIP has a higher administrative distance
D. Fa0/0, because OSPF has a lower administrative distance
E. Fa0/1, because OSPF has a lower administrative distance
F. Fa0/1, because RIP has a lower administrative distance

Answer: E

QUESTION 385
Refer to the exhibit. What is the potential issue with this configuration?

A. There is no potential issue; OSPF will work fine in any condition.
B. Sub-optimal routing may occur since there is no area 1 adjacency between the ABRs.

C. This is a wrong OSPF configuration because all routers must be in area 0 only.
D. This is a wrong OSPF configuration because /30 requires 0.0.0.3 wild card.

Answer: B
Explanation:
The primary difference is that the GRE tunnel hides the real recipients under the outer IP header. The "transit" area, in that case, does not need to actually know all the prefixes. What it needs, though, is a default route that points towards the backbone. Suboptimal routing may occur, then, because the traffic from the "transit" area must first reach the backbone in order to get GRE-encapsulated and carried again through the "transit" area to the disconnected area.

QUESTION 386
Refer to the exhibit. What triggered the first SPF recalculation?

```
C1#show ip ospf statistics
          OSPF Router with ID (11.100.1.11) (Process ID 100)
  Area 0: SPF algorithm executed 2 times
  Summary OSPF SPF statistic
  SPF calculation time
Delta T    Intra D-Intra Summ   D-Summ  Ext    D-Ext  Total  Reason
00:05:12   0     0       0      0       0      0      0      R, SN, X
00:05:02   0     0       0      0       0      0      0      R, SN, X
00:02:57   0     0       0      0       0      0      0      X
```

A. changes in a router LSA, subnet LSA, and external LSA
B. changes in a router LSA, summary network LSA, and external LSA
C. changes in a router LSA, summary network LSA, and summary ASBR LSA
D. changes in a router LSA, summary ASBR LSA, and external LSA

Answer: B
Explanation:
OSPFv2 is built around links, and any IP prefix change in an area will trigger a full SPF. It advertises IP information in Router and Network LSAs. The routers thus, advertise both the IP prefix information (or the connected subnet information) and topology information in the same LSAs. This implies that if an IP address attached to an interface changes, OSPF routers would have to originate a Router LSA or a Network LSA, which btw also carries the topology information. This would trigger a full SPF on all routers in that area, since the same LSAs are flooded to convey topological change information. This can be an issue with an access router or the one sitting at the edge, since many stub links can change regularly.
Only changes in interarea, external and NSSA routes result in partial SPF calculation (since type 3, 4, 5 and 7 LSAs only advertise IP prefix information) and thus IS-IS's PRC is more pervasive than OSPF's partial SPF.
This difference allows IS-IS to be more tolerant of larger single area domains whereas OSPF forces hierarchical designs for relatively smaller networks. However with the route leaking from L2 to L1 incorporated into IS-IS the apparent motivation for keeping large single area domains too goes away. SPF is calculated in three phases. The first is the calculation of intra-area routes by building the shortest path tree for each attached area. The second phase calculates the inter-area routes by examining the summary LSAs and the last one examines the AS-External-LSAs to calculate the routes to the external destinations.

QUESTION 387
Which two orders in the BGP Best Path Selection process are correct? (Choose two.)

A. Higher local preference, then lowest MED, then eBGP over iBGP paths
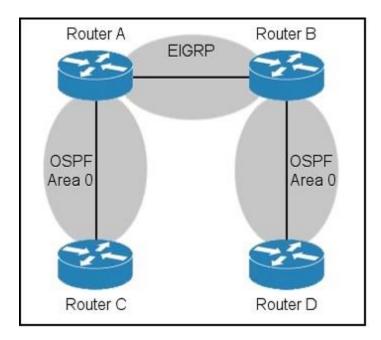
B. Higher local preference, then highest weight, then lowest router ID
C. Highest weight, then higher local preference, then shortest AS path
D. Lowest origin type, then higher local preference, then lowest router ID
E. Highest weight, then higher local preference, then highest MED

Answer: AC
Explanation:
Weight is the first attribute BGP uses in the route selection process. Route with a higher weight is preferred when multiple routes exist to the same destination.

QUESTION 388
Refer to the exhibit. Which action must you take to enable full reachability from router C to router D?

A. Build an OSPF virtual link.
B. Build an OSPF sham link.
C. Configure mutual redistribution between OSPF and EIGRP on routers A and B.
D. Add a static route on router D.

Answer: C

QUESTION 389
Which two Cisco Express Forwarding tables are located in the data plane? (Choose two.)

A. the forwarding information base
B. the label forwarding information base
C. the IP routing table
D. the label information table
E. the adjacency table

Answer: AE

Explanation:
http://www.cisco.com/c/en/us/td/docs/ios/12_2/switch/configuration/guide/fswtch_c/xcfcef.html

QUESTION 390
Which option is the most effective action to avoid packet loss due to microbursts?

A. Implement larger buffers.
B. Install a faster CPU.
C. Install a faster network interface.
D. Configure a larger tx-ring size.

Answer: A

QUESTION 391
Which two statements about packet fragmentation on an IPv6 network are true? (Choose two.)

A. The fragment header is 64 bits long.
B. The identification field is 32 bits long.
C. The fragment header is 32 bits long.
D. The identification field is 64 bits long.
E. The MTU must be a minimum of 1280 bytes.
F. The fragment header is 48 bits long.

Answer: AB

QUESTION 392
You are backing up a server with a 1 Gbps link and a latency of 2 ms. Which two statements about the backup are true? (Choose two.)

A. The bandwidth delay product is 2 Mb.
B. The default TCP send window size is the limiting factor.
C. The default TCP receive window size is the limiting factor.
D. The bandwidth delay product is 500 Mb.
E. The bandwidth delay product is 50 Mb.

Answer: AC

QUESTION 393
Which two pieces of information does RTCP use to inform endpoint devices about the RTP flow? (Choose two.)

A. the transmitted octet
B. the lost packet count
C. session control function provisioning information
D. the CNAME for session participants
E. the authentication method
F. MTU size changes in the path of the flow

Answer: AB

QUESTION 394
Which two options are required parts of an EEM policy? (Choose two.)

A. event register keyword
B. body
C. environment must defines
D. namespace import
E. entry status
F. exit status

Answer: AB

QUESTION 395
Which two actions can you take to allow the greatest number of pertinent packets to be stored in the temporary buffer of Cisco IOS Embedded Packet Capture? (Choose two.)

A. Specify the sampling interval.
B. Specify the capture buffer type.
C. Specify a reflexive ACL.
D. Specify the minimum packet capture rate.
E. Specify the packet size.
F. Store the capture simultaneously onto an external memory card as the capture occurs.

Answer: AB

QUESTION 396
Which technology can be used to secure the core of an STP domain?

A. UplinkFast
B. BPDU guard
C. BPDU filter
D. root guard

Answer: D

QUESTION 397
What is the destination multicast MAC address for BPDUs on the native VLAN, for a switch that is running 802.1D?
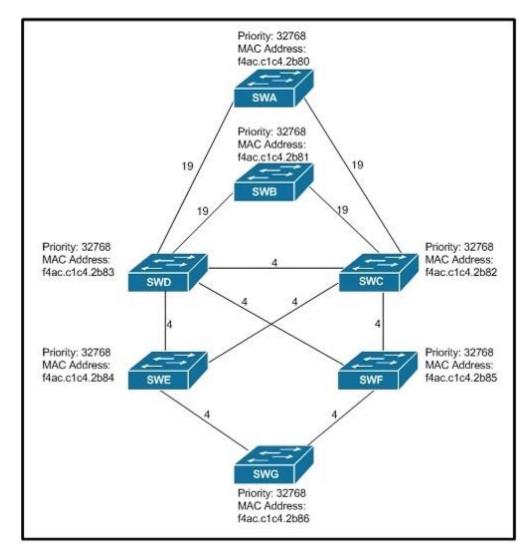
A. 0185. C400. 0000
B. 0100.0CCC.CCCC
C. 0100.0CCC.CCCD
D. 0180. C200. 0000

Answer: D

QUESTION 398

Refer to the exhibit. All switches have default bridge priorities, and originate BPDUs with MAC addresses as indicated. The numbers shown are STP link metrics.

After STP converges, you discover that traffic from switch SWG toward switch SWD takes a less optimal path. What can you do to optimize the STP tree in this switched network?

A. Change the priority of switch SWA to a lower value than the default value.
B. Change the priority of switch SWB to a higher value than the default value.
C. Change the priority of switch SWG to a higher value than the default value.
D. Change the priority of switch SWD to a lower value than the default value.

Answer: D

QUESTION 399
Which three statements are true about VSS? (Choose three.)

A. VSS separates the control planes of the active and the standby chassis.
B. Configuration changes can be made on both active and standby chassis.

C. When the VSS active chassis recovers after a failure, it initiates a switchover and takes on the active role again.
D. VSS unifies the control planes of the active and the standby chassis.
E. HSRP configuration is not required to run VSS.
F. The VSS standby chassis monitors the VSS active chassis using the VSL.

Answer: DEF

QUESTION 400
Which flag in a configuration BPDU instructs all switches to shorten their bridge table aging process from the default 300 seconds to the current forward delay value?
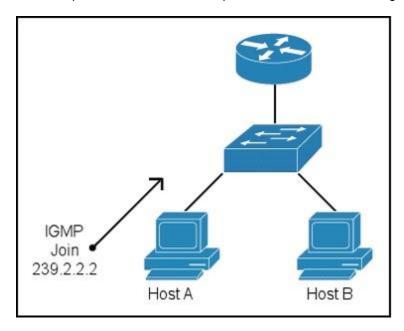
A. topology change bit
B. topology change acknowledgment bit
C. priority bit
D. max-age bit

Answer: A

QUESTION 401
Refer to the exhibit. Which technology can be used on the switch to enable host A to receive multicast packets for 239.2.2.2 but prevent host B from receiving them?

A. IGMP filtering
B. MLD snooping
C. IGMP snooping
D. MLD filtering

Answer: C

QUESTION 402
Which option describes the purpose of the PPP endpoint discriminator?

A. It identifies the maximum payload packet.
B. It notifies the peer that it prefers 12-bit sequence numbers.
C. It identifies the system attached to the link.
D. It determines whether a loopback is on the link.

Answer: C

QUESTION 403
Which three statements about SPAN traffic monitoring are true? (Choose three.)

A. Traffic from a non-source VLAN is discarded when it arrives on a source VLAN.
B. Multiple sessions can send traffic to an individual destination port.
C. It supports up to 32 SPAN ports per switch.
D. The destination port acts as a normal switchport.
E. It supports up to 64 SPAN ports per switch.
F. Only one session can send traffic to an individual destination port.

Answer: AEF

QUESTION 404
Which option describes how a VTPv3 device responds when it detects a VTPv2 device on a trunk port?

A. It sends VTPv3 packets only.
B. It sends VTPv2 packets only.
C. It sends VTPv3 and VTPv2 packets.
D. It sends a special packet that contains VTPv3 and VTPv2 packet information.

Answer: C

QUESTION 405
Which three statements about bridge assurance are true? (Choose three.)

A. Bridge assurance must be enabled on both ends of a link.
B. Bridge assurance can be enabled on one end of a link or on both ends.
C. Bridge assurance is enabled on STP point-to-point links only.
D. Bridge assurance is enabled on STP multipoint links only.
E. If a bridge assurance port fails to receive a BPDU after a timeout, the port is put into a blocking state.
F. If a bridge assurance port fails to receive a BPDU after a timeout, the port is put into an error disabled state.

Answer: ACE

QUESTION 406
What is the hop limit for an MLD message?
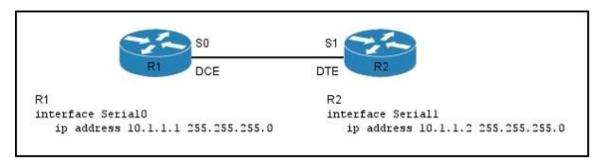
A. 1
B. 2
C. 15
D. 255

Answer: A

QUESTION 407
Refer to the exhibit. Which action must you take to enable the WAN link to function properly?

A. Enter a clock rate on the DCE interface.
B. Enter a clock rate on the DTE interface.
C. Enter a compression algorithm on both interfaces.
D. Configure both interfaces for HDLC encapsulation.

Answer: A

QUESTION 408
Which two options are the two main phases of PPPoE? (Choose two.)

A. Active Discovery Phase
B. IKE Phase
C. Main Mode Phase
D. PPP Session Phase
E. Aggressive Mode Phase
F. Negotiation Phase

Answer: AD

QUESTION 409
Which three statements about EVCs are true? (Choose three.)

A. Spanning Tree must use MST mode on EVC ports.
B. PAGP is supported on EVC ports.
C. Spanning Tree must use RSTP mode on EVC ports.
D. LACP is supported on EVC ports.
E. Layer 2 multicast framing is supported.
F. Bridge domain routing is required.

Answer: ABD

QUESTION 410
Refer to the exhibit. Why is the router out of memory?

```
Router#show version

Router processor (revision 0x00) with 524288K bytes of memory.


Router#show memory statistics
                 Head     Total(b)     Used(b)     Free(b)    Lowest(b)   Largest(b)
Processor     38A6400   405117952    360086164    1031788     37130412    34036896

Router#show process memory
 PID TTY  Allocated      Freed      Holding     Getbufs    Retbufs Process
   0   0   73373216    1706280     69497168          0          0 *Init*
 154   0 1103256760 1247933568    311905892     204360          0 BGP Router
 327   0  212528944  322521272     44071084          0          0 IP RIB Update


Router#show ip bgp summary
BGP router identifier 1.1.1.1, local AS number 65000
BGP table version is 310248959, main routing table version 310248959
246316 network entries using 29557920 bytes of memory
1586197 path entries using 76137456 bytes of memory
256960/41528 BGP path/bestpath attribute entries using 27751680 bytes of memory
440 BGP rrinfo entries using 10560 bytes of memory
115467 BGP AS-PATH entries using 3047538 bytes of memory
5952 BGP community entries using 479704 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
230723 BGP filter-list cache entries using 2768676 bytes of memory
BGP using 139753534 total bytes of memory
Dampening enabled. 8 history paths, 0 dampened paths
631350 received paths for inbound soft reconfiguration
BGP activity 9798913/9552597 prefixes, 220384574/218798377 paths, scan interval 60 secs
Neighbor     V    AS MsgRcvd MsgSent    TblVer  InQ OutQ Up/Down  State/PfxRcd
1.1.1.2      4 65001 39985912  1384531 310248959    0    0 9w1d         277030
1.1.1.3      4 65001 12269759   529250 310248959    0    0 26w0d        276929
1.1.1.4      4 65001 42728751 20209410 310248959    0    0 32w2d        200372
1.1.1.5      4 65001 46624114 20179383 310248959    0    0 1y14w        200372
```

A. The router is experiencing a BGP memory leak software defect.
B. The BGP peers have been up for too long.
C. The amount of BGP update traffic in the network is too high.
D. The router has insufficient memory due to the size of the BGP database.

Answer: D

QUESTION 411
Refer to the exhibit. Why is the OSPF state in 2WAY/DROTHER?

```
R1#show ip ospf neighbor

Neighbor ID     Pri   State          Dead Time   Address        Interface
192.168.2.2       0   2WAY/DROTHER   00:00:35    10.25.123.2    Ethernet0/0
192.168.3.3       0   2WAY/DROTHER   00:00:38    10.25.123.3    Ethernet0/0
R1#
```

A. This is the expected output when the interface Ethernet0/0 of R1 is configured with OSPF Priority 0.
B. There is a duplicate router ID.
C. There is an MTU mismatch.
D. There is an OSPF timer (hello/dead) mismatch.

E. This is the expected output when R1 is the DR.

Answer: A

QUESTION 412
In a nonbackbone OSPF area, all traffic that is destined to the Internet is routed by using a default route that is originated by the ABR. Which change in the configuration of the OSPF area type causes traffic from that area that is destined to the Internet to be dropped?
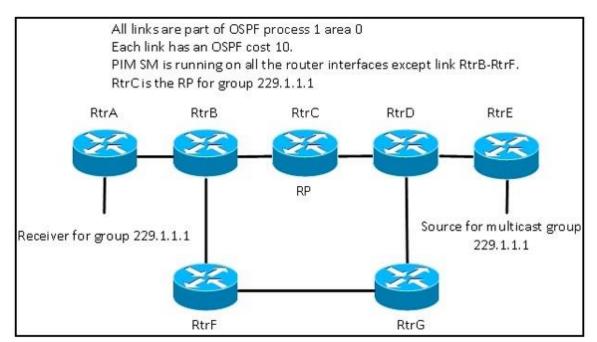
A. The OSPF area changes from NSSA to totally stubby area.
B. The OSPF area changes from NSSA to regular area.
C. The OSPF area changes from stub area to totally stubby area.
D. The OSPF area changes from stub area to NSSA.

Answer: D

QUESTION 413
Refer to the exhibit. When the link between RtrB and RtrC goes down, multicast receivers stop receiving traffic from the source for multicast group 229.1.1.1.Which solution will resolve this?

A. adding a static mroute on RtrB and RtrF
B. adding a static unicast route on RtrB and RtrF
C. creating a GRE tunnel between RtrB and RtrD
D. enabling PIM sparse mode on both ends of the link between RtrB and RtrF

Answer: D

QUESTION 414
Which measure does ISIS use to avoid sending traffic with a wrong MTU configuration?

A. ISIS does not protect from MTU mismatch.
B. MTU value is communicated in ISIS Sequence Number PDUs (SNP), and ISIS adjacency is not established if an MTU mismatch is detected.
C. ISIS uses path MTU discovery as specified in RFC 1063.
D. ISIS uses padding of hello packets to full MTU.

Answer: D

QUESTION 415
Which regular expression will match prefixes from the AS 200 that is directly connected to our AS?

A. ^$
B. ^200)
C. _200$
D. _200_
E. ^200_

Answer: E

QUESTION 416
Refer to the exhibit. Assuming that the peer is configured correctly and the interface is up, how many neighbors will be seen in the EIGRPv6 neighbor table on this IPv6-only router?

```
!
interface Loopback10
 no ip address
 ipv6 address 6010:AB8::/64 eui-64
!
interface Loopback20
 no ip address
 ipv6 address 6020:AB8::/64 eui-64
!
interface Ethernet0/0
 no ip address
 ipv6 enable
 ipv6 eigrp 50
!
ipv6 router eigrp 50
!
```

A. one neighbor, which will use a local router-id of 6010. AB8. . /64
B. one neighbor, which will use a local router-id of 6020. AB8. . /64
C. none, because EIGRPv6 only supports authenticated peers
D. none, because of the mismatch of timers
E. none, because there is no EIGRP router ID configured

Answer: E

QUESTION 417
What does a nonzero forwarding address indicate in a type-5 LSA?

A. It indicates that this link-state ID is eligible for ECMP.
B. It indicates that this router should have an OSPF neighbor relationship with the forwarding address before using this link-state ID.
C. It indicates that the receiving router must check that the next hop is reachable in its routing table before using this link-state ID.
D. It indicates that traffic can be directly routed to this next hop in shared segment scenarios where the external route source is directly connected.

Answer: D

QUESTION 418
Which type of EIGRP routes are summarized by the auto-summary command?

A. internal routes that are learned from a peer that is outside the range of local network statements
B. external routes that are learned from a peer that is inside the range of local network statements
C. locally created routes that are outside the range of local network statements
D. external routes that are learned from a peer that is outside the range of local network statements

Answer: B

QUESTION 419
Refer to the exhibit. How can the EIGRP hello and hold time for Gig0/0 be changed to 5 and 15?

```
router eigrp foo
 !
 address-family ipv4 unicast autonomous-system 1
  !
  af-interface default
   hello-interval 10
   hold-time 30
  exit-af-interface
  !
  topology base
  exit-af-topology
  network 10.0.0.0
 exit-address-family
```

A. No action is required, since Gig0/0 is not listed with a nondefault hello and hold time.
B. Add the commands ip hello-interval eigrp 1 5 and ip hold-time eigrp 1 15 under interface Gig0/0.
C. Add the commands hello-interval 5 and hold-time 15 under "af-interface Gig0/0" under the address family.
D. Add the commands default hello-interval and default hold-time under the af-interface Gig0/0 statement under the address family.

Answer: C

QUESTION 420
What is the range of addresses that is used for IPv4-mapped IPv6 addresses?

A. 2001. db9. . /32
B. 2001. db8. . /32
C. 2002. . /16
D. . . ffff. /16
E. . . ffff. 0. 0/96

Answer: E

QUESTION 421
Which three features require Cisco Express Forwarding? (Choose three.)

A. NBAR
B. AutoQoS
C. fragmentation
D. MPLS
E. UplinkFast
F. BackboneFast

Answer: ABD

QUESTION 422
Which two options are interface requirements for turbo flooding? (Choose two.)

A. The interface is Ethernet.
B. The interface is configured for ARPA encapsulation.
C. The interface is PPP.
D. The interface is configured for GRE encapsulation.
E. The interface is configured for 802.1Q encapsulation.

Answer: AB

QUESTION 423
Which three option are sub-subfields of the IPv4 Option Type subfield? (Choose three.)

A. Option Class
B. GET
C. Copied
D. PUSH
E. Option Number
F. TTL

Answer: ACE

QUESTION 424
Which TCP mechanism prevents the sender from sending data too quickly for the receiver to process?

A. Congestion control
B. Error detection
C. Selective acknowledgement
D. Flow control

Answer: D

QUESTION 425
Which two packet types does an RTP session consist of? (Choose two.)

A. TCP
B. RTCP
C. RTP
D. ICMP
E. BOOTP
F. ARP

Answer: BC

QUESTION 426
Which option describes the effect of the OSPF default-information originate always command?

A. It creates a stub area.
B. It configures the device to advertise a default route regardless of whether it exists in the routing table.
C. It configures the device to automatically redistribute a default route.
D. It adds a static default route to the device configuration.

Answer: B

QUESTION 427
Which technology can create a filter for an embedded packet capture?

A. Control plane policing
B. Access lists
C. NBAR
D. Traffic shaping

Answer: B

QUESTION 428
Which two options are reasons to manipulate the delay metric instead of the bandwidth metric for EIGRP routing? (Choose two.)

A. Because the delay metric provides better handling for bursty traffic

B. Because manipulating the bandwidth metric can also affect QoS
C. Because manipulating the bandwidth affects only a particular path
D. Because changes to the delay metric are propagated to all neighbors on a segment

Answer: BD

QUESTION 429
Which option describes a limitation of Embedded Packet Capture?

A. It can capture data only on physical interfaces and subinterfaces.
B. It can store only packet data.
C. It can capture multicast packets only on ingress.
D. It can capture multicast packets only on egress.

Answer: C

QUESTION 430
Which statement about Cisco Discovery Protocol is true?

A. The multicast address 0100.0cdd.dddd is used as the destination address for periodic advertisements.
B. An inactive VLAN that is configured on an access port passes periodic Cisco Discovery Protocol advertisements.
C. The multicast address 0100.0ccc.ccd is used as the destination address for periodic advertisements.
D. A VLAN must be active on an access port before periodic Cisco Discovery Protocol advertisements are passed.

Answer: D

QUESTION 431
Which three TLVs does LLDP use to discover network devices? (Choose three.)

A. Management address
B. Port description
C. Network policy
D. System name
E. Location information
F. Power management

Answer: ABD

QUESTION 432
Which command enables L2 QoS support in all VLANs (including the native VLAN)?

A. switchport priority extend cos
B. mls qos trust dscp
C. mls qos rewrite ip dscp
D. switchport trunk native vlan tag

Answer: D

QUESTION 433
Which three modes are valid for forming an EtherChannel between the ports of two switches?
(Choose three.)

A. Active/active
B. Active/passive
C. Passive/passive
D. Auto/auto
E. Auto/desirable
F. Desirable/on

Answer: ABE

QUESTION 434
In which 802.1D port state are the root bridge, the root port, and the designated port(s) elected?

A. Listening
B. learning
C. forwarding
D. blocking
E. disabled

Answer: A

QUESTION 435
Refer to the exhibit. A Cisco Catalyst 6500 Series Switch experiences high CPU utilization.
What can be the cause of this issue, and how can it be prevented?

```
switch#show mls cef exception status
Current IPv4 FIB exception state = TRUE
Current IPv6 FIB exception state = FALSE
Current MPLS FIB exception state = FALSE
```

A. The hardware routing table is full. Redistribute from BGP into IGP.
B. The software routing table is full. Redistribute from BGP into IGP.
C. The hardware routing table is full. Reduce the number of routes in the routing table.
D. The software routing table is full. Reduce the number of routes in the routing table.

Answer: C

QUESTION 436
In a network where a Layer 2 switch interconnects several routers, which feature restricts
multicast packets for each IP multicast group to only those mulicast router ports that have
downstream receivers joined to that group?

A. PIM snooping
B. IGMP snooping

C. IGMP filter
D. IGMP proxy

Answer: A

QUESTION 437
Which three statements about Cisco HDLC are true? (Choose three.)

A. HDLC serial encapsulation provides asynchronous framing and error detection.
B. Serial link keepalives are maintained by SLARP.
C. HDLC serial encapsulation provides synchronous framing without retransmission.
D. HDLC frame size can be reduced with MPPC compression.
E. The interface is brought down after five ignored keepalives.
F. The interface is brought down after three ignored keepalives.

Answer: BCF

QUESTION 438
Which two fields reside in the initial CHAP challenge packet? (Choose two.)

A. the authentication name of the challenger
B. a random hash value generated by the device
C. the hashed packet type ID
D. the packet type ID in clear text

Answer: AD

QUESTION 439
Which statement about WAN Ethernet Services is true?

A. Rate-limiting can be configured per EVC.
B. Point-to-point processing and encapsulation are performed on the customer network.
C. Ethernet multipoint services function as a multipoint-to-multipoint VLAN-based connection.
D. UNIs can perform service multiplexing and all-in-one bundling.

Answer: A

QUESTION 440
What is the maximum number of secondary IP addresses that can be configured on a router interface?

A. 1
B. 2
C. 4
D. 1024
E. 65535
F. no limit to the number of addresses

Answer: F

QUESTION 441
Which address is a MAC address that is mapped from an IPv6 address (RFC 2464)?

A. 3333.FF17.FC0F
B. FFFE. FF17.FC0F
C. FF34.3333.FF17
D. FF7E.FF17.FC0F

Answer: A

QUESTION 442
Which multicast protocol uses source trees and RPF?

A. DVMRP
B. PIM sparse mode
C. CBT
D. mOSPF

Answer: A

QUESTION 443
What is the function of the command ip pim autorp listener?

A. It allows a border PIM sparse mode router to accept autorp information from another autonomous system.
B. It allows the mapping agents to accept autorp information from the PIM rendezvous point.
C. It allows the routers to flood the autorp information in a sparse-mode-only network.
D. It allows a BSR to accept autorp information and translate it into BSR messages.

Answer: C

QUESTION 444
Refer to the exhibit. Which statement is true about why the first-hop PIM IPv6 router is stuck in registering?

```
FHR#show ipv6 mroute FF7E::1234
(2001:db8::7, FF7E::1234), 00:02:27/00:01:02, flags: SFT
  Incoming interface: Ethernet1/0
  RPF nbr: FE80::A8BB:CCFF:FE00:701, Registering
  Immediate Outgoing interface list:
    Tunnel2, Forward, 00:01:38/never
```

A. The scope of the IPv6 multicast address is link-local.
B. The outgoing interface for the IPv6 multicast group should not be a tunnel interface.
C. The R-bit is set in the IPv6 address, but this is not an embedded RP multicast IPv6 address.

D. The S flag should not be set on a first-hop PIM router.
E. A multicast IPv6 address does not start with FF.

Answer: C

QUESTION 445
Refer to the exhibit. Which option is the result of this configuration?

```
!
ip access-list extended REDIRECT
permit tcp any any eq 25
!
route-map REDIRECT 10
match ip address REDIRECT-SNMP
set interface GigabitEthernet1/0
!
interface loopback0
ip address 172.21.254.254 255.255.252.0
!
ip local policy route-map REDIRECT-SNMP
!
```

A. All SNMP traffic coming into the router is redirected to interface GigabitEthernet1/0.
B. All SNMP traffic generated from the router is redirected to interface GigabitEthernet1/0.
C. All SMTP traffic generated from the router is redirected to interface GigabitEthernet1/0.
D. All POP3 traffic coming into the router is redirected to interface GigabitEthernet1/0.
E. All SMTP traffic coming into the router is redirected to interface GigabitEthernet1/0.

Answer: C

QUESTION 446
Which three statements about EIGRP and BFD are true? (Choose three.)

A. BFD is independent of the routing protocol, so it can be used as a generic failure detection mechanism for EIGRP.
B. Some parts of BFD can be distributed to the data plane, so it can be less CPU-intensive than reduced timers, which exist wholly at the control plane.
C. Reduced EIGRP timers have an absolute minimum detection timer of 1-2 seconds; BFD can provide sub-second failure detection.
D. BFD is tied to specific routing protocols and can be used for generic fault detection for the OSPF, EIGRP, and BGP routing protocols.
E. BFD is dependent on the EIGRP routing protocol, so it can be used as a specific failure detection mechanism.
F. BFD resides on the control plane, so it is less CPU-intensive than if it resided on the data plane.

Answer: ABC

QUESTION 447
You are implementing new addressing with EIGRP routing and must use secondary addresses,

which are missing from the routing table. Which action is the most efficient solution to the problem?

A. Disable split-horizon on the interfaces with secondary addresses.
B. Disable split-horizon inside the EIGRP process on the router with the secondary interface addresses.
C. Add additional router interfaces and move the secondary addresses to the new interfaces.
D. Use a different routing protocol and redistribute the routes between EIGRP and the new protocol.

Answer: A

QUESTION 448
Refer to the exhibit. Which two options are possible states for the interface configured with the given OSPFv3 authentication? (Choose two.)

```
R1(config-if)#ipv6 ospf authentication ipsec spi 256 md5 0 o-routes
```

A. GOING UP
B. DOWN
C. UNCONFIGURED
D. GOING DOWN

Answer: AB

QUESTION 449
Refer to the exhibit. The device with this configuration is unable to reach network 172.31.31.0/24.
The next hop router has been verified to have full connectivity to the network.
Which two actions can you take to establish connectivity to the network? (Choose two.)

```
ip route 10.0.0.0 255.255.255.0 192.168.192.9
ip default-network 172.16.199.9
```

A. Create a static route to 172.16.199.0 using the address of the next hop router.
B. Create a default route to the link address of the next hop router.
C. Create a static route to the loopback address of the next hop router.
D. Create a default route to 172.16.199.9.
E. Modify the existing static route so that the next hop is 0.0.0.0.
F. Replace the ip default-network command with the ip default-gateway command.

Answer: AB

QUESTION 450
Which algorithm heavily influenced the algorithm used by path-vector protocols?

A. Bellman-Ford
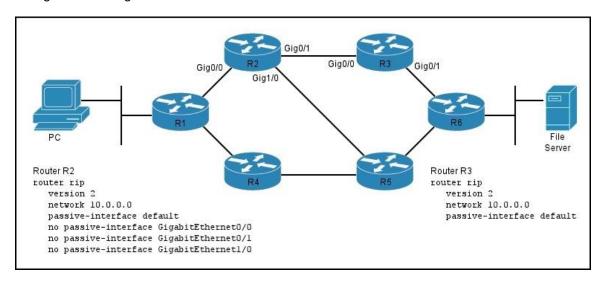
B. SPF
C. DUAL
D. Spanning-Tree
E. Adaptive
F. Deflection

Answer: A

QUESTION 451
Refer to the exhibit. All of the routers on this network are running RIP. If you edit the R3 RIP process configuration to reduce the number of hops from R3 to R1, which statement about the configuration change is true?

A. Configuring no passive-interface for GigabitEthernet0/0 in the R3 RIP process reduces the number of hops to R1 by 2.
B. Configuring no passive-interface for GigabitEthernet0/0 in the R3 RIP process reduces the number of hops to R1 by 1.
C. Configuring no passive-interface for GigabitEthernet0/1 in the R3 RIP process reduces the number of hops to R1 by 3.
D. Configuring no passive-interface for GigabitEthernet0/1 in the R3 RIP process reduces the number of hops to R1 by 1.

Answer: A

QUESTION 452
Where should the passive-interface command be used?

A. Under the routing process for interfaces that need to be routed, but prevented from peering
B. under the routing process for interfaces that need to be routed and allowed to peer
C. under the interface configuration for interfaces that need to be routed, but prevented from peering
D. under the interface configuration for interfaces that need to be routed and allowed to peer
E. under the VTY configuration within global configuration mode

Answer: A

QUESTION 453

Refer to the exhibit. Which statement about the device routing table is true?
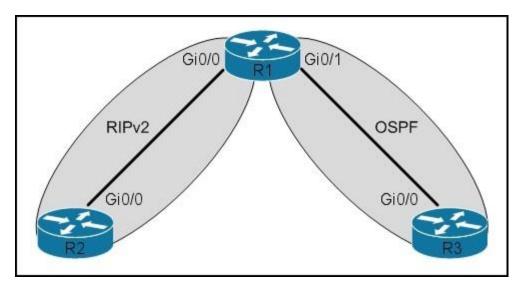
```
ip prefix-list EIGRP-ROUTES seq 5 permit 10.10.10.0/24 le 32
ip prefix-list OUTBOUND seq 5 permit 192.168.168.1/32
router eigrp 65535
network 192.168.168.0 0.0.255.255
network 172.31.10.0 0.0.0.255
distribute-list prefix EIGRP-ROUTES gateway OUTBOUND in
```

A. Only networks 10.10.10.0/24 and smaller from host 192.168.168.1 are in the routing table.
B. Only networks 10.10.10.0/24 and larger from host 192.168.168.1 are in the routing table.
C. Only network 10.10.10.0/24 from host 192.168.168.1 is in the routing table.
D. Networks 10.10.10.0/24 and smaller from any host are in the routing table.

Answer: A

QUESTION 454

Refer to the exhibit. R1 is performing mutual redistribution, but OSPF routes from R3 are unable to reach R2. Which three options are possible reasons for this behavior? (Choose three.)

A. R1 requires a seed metric to redistribute RIP.
B. The RIP version supports only classful subnet masks.
C. R1 is filtering OSPF routes when redistributing into RIP.
D. R3 and R1 have the same router ID.
E. R1 and R3 have an MTU mismatch.
F. R2 is configured to offset OSPF routes with a metric of 16.

Answer: ACF

QUESTION 455
Refer to the exhibit. If the downstream router has a summary route configured, which two actions must you take on the local router to create the summary route that summarizes all routes from the downstream router? (Choose two.)

```
R1#sh ip eigrp 1 topology all
IP-EIGRP Topology Table for AS(1)/ID(10.1.1.2)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 10.8.1.0/24, 1 successors, FD is 156160, serno 7
    via 10.1.1.1 (156160/128256), FastEthernet1/0
P 10.1.1.0/24, 1 successors, FD is 28160, serno 1
    via Connected, FastEthernet1/0
P 10.6.1.0/24, 1 successors, FD is 156160, serno 8
    via 10.1.1.1 (156160/128256), FastEthernet1/0
```

A. Configure the summary address on the interface.
B. Use 10.0.0.0 255.248.0.0 as the summary route.
C. Configure the summary address in the EIGRP process.
D. Use 10.0.0.0 255.252.0.0 as the summary route.
E. Configure a route map to permit the route.
F. Configure a distribute list in.

Answer: AB

QUESTION 456
Which three statements about RIP timers are true? (Choose three.)

A. The default update timer is 30 seconds.
B. The default invalid timer is 180 seconds.
C. The default holddown timer is 180 seconds.
D. The default flush timer is 60 seconds.
E. The default scan timer is 60 seconds.
F. The default hello timer is 5 seconds.

Answer: ABC

QUESTION 457
Which timer expiration can lead to an EIGRP route becoming stuck in active?

A. hello
B. active
C. query
D. hold

Answer: B

QUESTION 458
Which three values can be used to tag external EIGRP routes? (Choose three.)

A. The router ID of the router that redistributed the route
B. The administrative distance of the external protocol
C. The protocol ID of the external protocol
D. The cost to reach the router that redistributed the route
E. The metric from the external protocol
F. The router ID of the router from which the external protocol route was learned

Answer: ACE

QUESTION 459
Which data plane protocol does EIGRP Over the Top use?

A. MPLS
B. GRE
C. LISP
D. IP-in-IP

Answer: C

QUESTION 460
Which statement about the feasible distance in EIGRP is true?

A. It is the maximum metric that should feasibly be considered for installation in the RIB.
B. It is the minimum metric to reach the destination as stored in the topology table.
C. It is the metric that is supplied by the best next hop toward the destination.
D. It is the maximum metric possible based on the maximum hop count that is allowed.

Answer: B

QUESTION 461
Which statement about the EIGRP RTO is true?

A. It is six times the SRTT.
B. It is the time that it normally takes for an update to be received by a peer.
C. It is the time that it normally takes to receive a reply to a query.
D. It is the average time that it takes for a reliable packet to be acknowledged.

Answer: A

QUESTION 462
Which option describes the purpose of the leak-map keyword in the command eigrp stub connected leak- map EigrpLeak?

A. It allows the specified static routes to be advertised.
B. It allows exceptions to the route summarization that is configured.
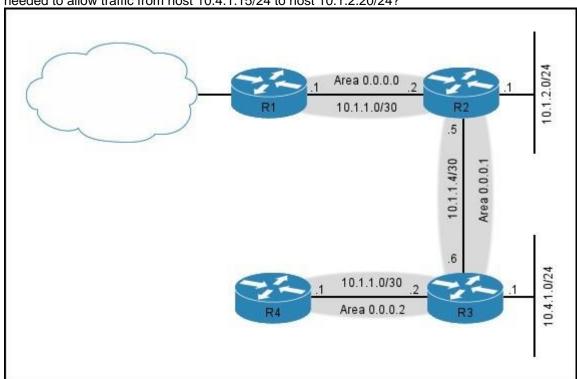
C. It allows specified EIGRP-learned routes to be advertised.
D. It restricts specified connected routes from being advertised.

Answer: C

QUESTION 463
Refer to the exhibit. If OSPF is implemented on the network, which additional configuration is needed to allow traffic from host 10.4.1.15/24 to host 10.1.2.20/24?
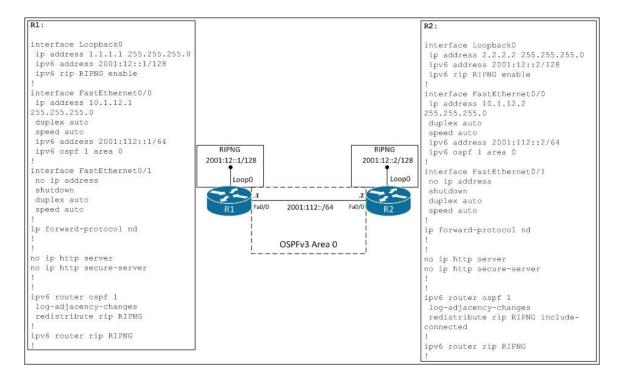
A. A virtual link between router 2 and router 4
B. A virtual link between router 3 and router 4
C. A virtual link between router 2 and router 3
D. The current design allows traffic between the two hosts.

Answer: D

QUESTION 464
Refer to the exhibit. Which OSPFv3 routes will be visible in the routing table of R2?

```
R1:

interface Loopback0
 ip address 1.1.1.1 255.255.255.0
 ipv6 address 2001:12::1/128
 ipv6 rip RIPNG enable
!
interface FastEthernet0/0
 ip address 10.1.12.1
255.255.255.0
 duplex auto
 speed auto
 ipv6 address 2001:112::1/64
 ipv6 ospf 1 area 0
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
ipv6 router ospf 1
 log-adjacency-changes
 redistribute rip RIPNG
!
ipv6 router rip RIPNG
!
```

```
R2:

interface Loopback0
 ip address 2.2.2.2 255.255.255.0
 ipv6 address 2001:12::2/128
 ipv6 rip RIPNG enable
!
interface FastEthernet0/0
 ip address 10.1.12.2
255.255.255.0
 duplex auto
 speed auto
 ipv6 address 2001:112::2/64
 ipv6 ospf 1 area 0
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
ipv6 router ospf 1
 log-adjacency-changes
 redistribute rip RIPNG include-
connected
!
ipv6 router rip RIPNG
!
```

A. 2001:12::1/128
B. 2001:12::1/128, 2001:112::1/128
C. 2001:12::2/128
D. No OSPFv3 routes will be visible.

Answer: D

QUESTION 465
Refer to the exhibit. R1 is configured as shown. R1 is able to establish a neighbor adjacency only with R2. Which addition must you make to the R1 configuration to allow it to establish an adjacency with R3?

```
interface gigabitethernet 0/0
ip address 10.0.0.1 255.255.255.0

interface gigabitethernet 0/1
ip address 10.1.0.1 255.255.255.0

router ospf 1
network 10.0.0.0 0.0.0.255 area 0
```

A. interface gigabitethernet 0/1
    ip address 10.1.0.1 255.255.255.0
    ip ospf network point-to-point
B. interface gigabitethernet 0/1
    ip address 10.1.0.1 255.255.255.0
    ip ospf 1 area 0
C. router ospf 1
    network 10.1.0.0 0.0.0.255 area 1
    router ospf 1
    area 0 stub

Answer: C

QUESTION 466
Which option describes how a router responds if LSA throttling is configured and it receives the identical LSA before the interval is set?

A. The LSA is added to the OSPF database and a notification is sent to the sending router to slow down its LSA packet updates.
B. The LSA is added to the OSPF database.
C. The LSA is ignored.
D. The LSA is ignored and a notification is sent to the sending router to slow down its LSA packet updates.

Answer: C

QUESTION 467
Which two options are valid for the number of bytes in a BGP AS number? (Choose two.)
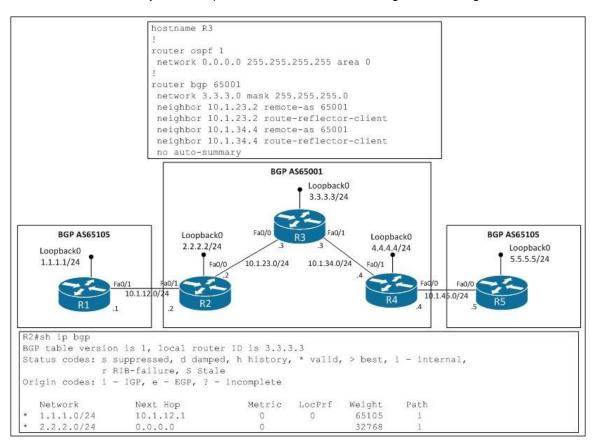
A. 2 bytes
B. 4 bytes
C. 6 bytes
D. 8 bytes
E. 16 bytes

Answer: AB

QUESTION 468
Refer to the exhibit. Why is the loopback 0 interface of R4 missing in the routing table of R2?

A. R2 is configured as a route reflector client.
B. There is no peering between R2 and R3.
C. The next hop is not reachable from R2.
D. The route originated within the same AS.

Answer: B

QUESTION 469
Which statement about the BGP scope of the cost community is true?

A. It is shared with IBGP neighbors only.
B. It is shared with IBGP neighbors and route reflectors.
C. It is shared with EBGP neighbors only.
D. It is shared with IBGP and EBGP neighbors.
E. It is shared with IBGP and confederation peers.

Answer: E

QUESTION 470
Which statement is true about conditional advertisements?
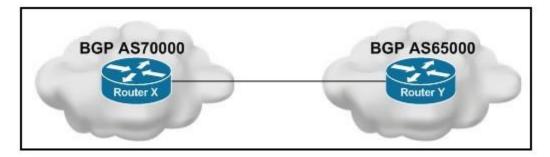
A. Conditional advertisements create routes when a predefined condition is met.
B. Conditional advertisements create routes when a predefined condition is not met.
C. Conditional advertisements delete routes when a predefined condition is met.
D. Conditional advertisements create routes and withhold them until a predefined condition is met.
E. Conditional advertisements do not create routes, they only withhold them until a predefined
    condition is met.

Answer: E

QUESTION 471
Refer to the exhibit. How can Router X in AS70000 peer with Router Y in AS65000, in case
Router Y supports only 2-byte ASNs?

A. Router X should be configured with a remove-private-as command, because this will establish the
    peering session with a random private 2-byte ASN.
B. It is not possible. Router Y must be upgraded to an image that supports 4-byte ASN.
C. Router Y should be configured with a 4-byte AS using the local-as command.
D. Router X should be configured with a 2-byte AS using the local-as command.

Answer: D

QUESTION 472
Which statement about BGP and diverse path advertisement is true?

A. The BGP best-path selection must be disabled.
B. The BGP best-path selection algorithm has been changed to always ignore the IGP metric.
C. The BGP best-path selection algorithm has been changed so that two BGP paths can be flagged as best in the BGP table.
D. The BGP best-path selection algorithm has not been changed.
E. The BGP best-path selection is disabled for BGP routes for which the feature is enabled.

Answer: D

QUESTION 473
For which two conditions is Cisco Express Forwarding recursion disabled by default when the BGP Prefix Independent Convergence functionality is enabled? (Choose two.)

A. next hops learned with a /24 mask
B. next hops learned with any mask shorter than /32
C. next hops learned with a /32 mask
D. next hops that are directly connected

Answer: CD

QUESTION 474
How many bytes comprise the system ID within an IS-IS NET?

A. 4 bytes
B. 6 bytes
C. 8 bytes
D. 16 bytes
E. 20 bytes

Answer: B

QUESTION 475
Which two statements about IS-IS are true? (Choose two.)

A. The default hello interval is 10 seconds and the default hold timer is 30 seconds.
B. The hello interval can be changed on a per-interface basis with the command isis hello-multiplier.
C. Both routers need to have the same hello intervals and hold timers in order to form IS-IS neighbors.
D. Both IS-IS routers need to have the same capabilities in the hello packet in order to form neighbors.

Answer: AD
Explanation:

To specify the length of time between hello packets that the Cisco IOS software sends, use the isis hello-interval command in interface configuration mode.
By default, a value three times the hello interval seconds is advertised as the hold time in the hello packets sent. (Change the multiplier of 3 by specifying the isis hello-multiplier command.)
With smaller hello intervals, topological changes are detected faster, but there is more routing traffic.
The default is 10 seconds.
http://www.cisco.com/c/en/us/td/docs/ios/12_2/iproute/command/reference/fiprrp_r/1rfisis.html

QUESTION 476
Which bit should be set in the link-state PDU of an IS-IS L1/L2 router to indicate that it is a potential exit point of the area?

A. the ABR bit
B. the ATT bit
C. the down bit
D. the P bit

Answer: B

QUESTION 477
MPLS LDP IGP synchronization is configured on a link. The OSPF adjacency on that link is UP but MPLS LDP synchronization is not achieved. Which statement about this scenario is true?

A. The router excludes the link from its OSPF LSA type 1.
B. The router flushes its own router LSA.
C. The router advertises the link in its router LSA with max-metric.
D. The router advertises an LSA type 2 for this link, with the metric set to max-metric.
E. The router advertises the link and OSPF adjacency as it would when the synchronization is achieved.

Answer: C

QUESTION 478
What is the new designation for the MPLS EXP (experimental) bits?

A. QoS bits
B. traffic class bits
C. flow bits
D. precedence bits

Answer: B

QUESTION 479
Which two options are signaling protocols that are used in MPLS? (Choose two.)

A. LDP
B. RSVP
C. BFD

D. LISP
E. CLNS
F. CDP

Answer: AB

QUESTION 480
Which option is an incorrect design consideration when deploying OSPF areas?

A. area 1 - area 0 - MPLS VPN backbone - area 0 - area 2
B. area 1 - MPLS VPN backbone - area 2
C. area 1 - MPLS VPN backbone - area 1
D. area 2 - area 0 - MPLS VPN backbone - area 1
E. area 0 - area 2 - MPLS VPN superbackbone - area 1

Answer: E

QUESTION 481
Refer to the exhibit. Which statement about the route target for 192.168.1.0/24 is true?

```
ip vrf 10051
    rd 10.1.1.1:10051
    route-target export 64512:100010051
    route-target import 64512:100010051

ip access-list standard mgmt1-10051
    permit 192.168.1.0 0.0.0.255

route-map 10051-export permit 10
    match ip address mgmt1-10051
    set extcommunity rt 64512:3002300

route-map 10051-export permit 20
    match ip address mgmt1-10051
    set extcommunity rt 64512:2002250 64512:3002300 additive
```

A. Its route target is 64512:100010051.
B. Its route targets are 64512:100010051, 64512:2002250, and 64512:3002300.
C. Its route target is 64512:3002300.
D. Its route targets are 64512:100010051 and 64512:3002300.
E. Its route targets are 64512:2002250 and 64512:3002300.

Answer: C

QUESTION 482
Which two options are benefits of EIGRP OTP? (Choose two.)

A. It allows EIGRP routers to peer across a service provider without the service provider involvement.

B. It allows the customer EIGRP domain to remain contiguous.
C. It requires only minimal support from the service provider.
D. It allows EIGRP neighbors to be discovered dynamically.
E. It fully supports multicast traffic.
F. It allows the administrator to use different autonomous system numbers per EIGRP domain.

Answer: AB

QUESTION 483
Which three options are best practices for implementing a DMVPN? (Choose three.)

A. Use IPsec in tunnel mode.
B. Implement Dead Peer Detection to detect communication loss.
C. Configure AES for encryption of transported data.
D. Configure SHA-1 for encryption of transported data.
E. Deploy IPsec hardware acceleration to minimize router memory overhead.
F. Configure QoS services only on the head-end router.

Answer: ABC

QUESTION 484
Which IPv6 tunneling type establishes a permanent link between IPv6 domains over IPv4?

A. IPv4-compatible tunneling
B. ISATAP tunneling
C. 6to4 tunneling
D. manual tunneling

Answer: D

QUESTION 485
Which three components comprise the structure of a pseudowire FEC element? (Choose three.)

A. pseudowire ID
B. pseudowire type
C. control word
D. Layer 3 PDU
E. header checksum
F. type of service

Answer: ABC

QUESTION 486
In which two modes do IPv6-in-IPv4 tunnels operate? (Choose two.)

A. tunnel mode
B. transport mode
C. 6to4 mode

D. 4to6 mode

E. ISATAP mode

Answer: AB

QUESTION 487
Which VPN technology requires the use of an external key server?

A. GETVPN
B. GDOI
C. SSL
D. DMVPN
E. IPsec
F. L2TPv3

Answer: A

QUESTION 488
Which three roles does a key server perform when used with GETVPN? (Choose three.)

A. It authenticates group members.
B. It manages security policies.
C. It creates group keys.
D. It distributes multicast replication policies.
E. It distributes multicast replication keys.
F. It configures and routes the GDOI protocol.

Answer: ABC

QUESTION 489
Which two Cisco IOS AAA features are available with the local database? (Choose two.)

A. command authorization
B. network access authorization
C. network accounting
D. network access authentication

Answer: AD

QUESTION 490
What is the most secure way to store ISAKMP/IPSec preshared keys in Cisco IOS?

A. Use the service password-encryption command.
B. Encrypt the ISAKMP preshared key in secure type 5 format.
C. Encrypt the ISAKMP preshared key in secure type 7 format.
D. Encrypt the ISAKMP preshared key in secure type 6 format.

Answer: D

QUESTION 491
Which two statements about the protected ports feature and the private VLAN feature are true?
(Choose two.)

A. The protected ports feature is limited to the local switch.
B. The protected ports feature can isolate traffic between two "protected" ports on different switches.
C. The private VLAN feature is limited to the local switch.
D. The private VLAN feature prevents interhost communication within a VLAN across one or more switches.

Answer: AD

QUESTION 492
Which two features are used for inspection when IPv6 address glean is enabled? (Choose two.)

A. DHCP messages
B. ND messages
C. ICMPv6 messages
D. UDP messages
E. TCP messages

Answer: AB

QUESTION 493
Refer to the exhibit. Which statement about the R1 configuration is true?

```
R1#show run

ip ssh time-out 30
ip ssh authentication-retries 2

access-list 10 permit 10.1.1.2
no cdp log mismatch duplex

control-plane

line con 0
    exec-timeout 5 30
    logging synchronous
line aux 0
line vty 0 4
    access-class 10 in
    login
    transport input ssh
```

A. It permits host 10.1.1.2 to establish a Telnet connection to R1.
B. It limits remote hosts to two SSH connection attempts.
C. SSH connections to R1 will log out after a 5-minute idle interval.

D. Hosts that reside on network 10.0.0.0/8 can SSH to R1.
E. The R1 timeout for outgoing SSH connection attempts is 30 seconds.

Answer: E

QUESTION 494
Which two statements about the default SNMP configuration are true? (Choose two.)

A. The SNMP agent is enabled.
B. The SNMP trap receiver is configured.
C. All SNMP notification types are sent.
D. SNMPv1 is the default version.
E. SNMPv3 is the default version.

Answer: CD

QUESTION 495
Which two statements about logging are true? (Choose two.)

A. Log messages are sent to the console port by default.
B. Log messages are displayed in a Telnet session by default.
C. Interface status changes are logged at the Notification level.
D. Interface status changes are logged at the Informational level.
E. System restart messages are logged at the Critical level.
F. Reload requests are logged at the Notification level.

Answer: AC

QUESTION 496
Refer to the exhibit. Your network is suffering excessive output drops.
Which two actions can you take to resolve the problem? (Choose two.)

```
access-switch-1#show interface fastethernet0/9
FastEthernet0/9 is up, line protocol is up (connected)
    Hardware is Fast Ethernet, address is 04da.d237.9f09 (bia 04da.d237.9f09)
    Auto-duplex, Auto-speed, media type is 10/100BaseTX
    Last clearing of "show interface" counters never
    Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 59137853

access-switch-1#show mls qos interface fastethernet0/9 statistics
Queueset: 1
output queues dropped:
    queue:     threshold1    threshold2    threshold3
    ----------------------------------------------
    queue 0:           0             0         48252
    queue 1:    23164955      35924645             1
    queue 2:           0             0             0
    queue 3:           0             0             0
```

A. Install a switch with larger buffers.
B. Configure a different queue set.
C. Reconfigure the switch buffers.
D. Configure the server application to use TCP.
E. Update the server operating system.

Answer: AB

QUESTION 497
Refer to the exhibit. If the remaining configuration uses default values, what is the expected output of the show mls qos queue- set command?

```
mls qos queue-set output 1 threshold 2 80 90 100 100
mls qos queue-set output 1 threshold 3 400 400 100 800
mls qos queue-set output 1 threshold 4 60 100 100 100
```

A.
```
Queueset: 1
Queue      :      1        2        3        4
-------------------------------------------------
buffers    :     25       25       25       25
threshold1:    100       80      400       60
threshold2:    100       90      400      100
reserved   :     50      100      100      100
maximum    :    400      100      800      100
```

B.
```
Queueset: 1
Queue      :      1        2        3        4
-------------------------------------------------
buffers    :     25       25       25       25
threshold1:    100       80      400       60
threshold2:    100       90      400      100
reserved   :     50      100      100      100
maximum    :    100      100      800      100
```

C.
```
Queueset: 1
Queue      :      1        2        3        4
-------------------------------------------------
buffers    :     25       25       25       25
threshold1:     50       80      400       60
threshold2:     50       90      400      100
reserved   :     50      100      100      100
maximum    :    400      100      800      100
```

D.

```
Queueset: 1
Queue      :        1        2        3        4
----------------------------------------------------
buffers    :       25       25       25       25
threshold1:       100       80      400       60
threshold2:       100       90      400      100
reserved   :      100      100      100      100
maximum    :      400      100      800      100
```

Answer: A

QUESTION 498
Which two statements about HSRP are true? (Choose two.)

A. Its virtual MAC is 0000.0C07.Acxx.
B. Its multicast virtual MAC is 0000.5E00.01xx.
C. Its default configuration allows for pre-emption.
D. It supports tracking.
E. It supports unique virtual MAC addresses.

Answer: AD

QUESTION 499
Which two statements about the client-identifier in a DHCP pool are true? (Choose two.)
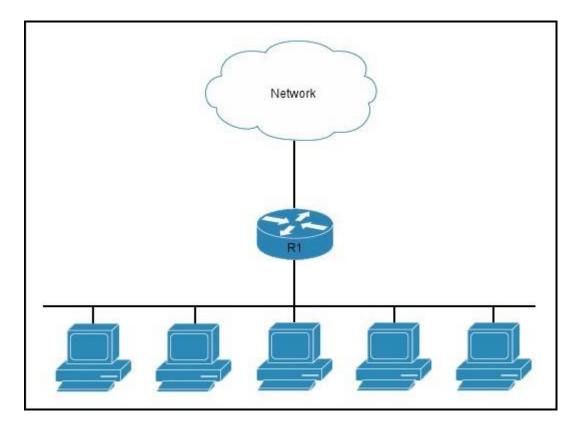
A. It specifies a unique identifier that is used only for DHCP requests.
B. It is specified by appending 01 to the MAC address of a DHCP client.
C. It specifies a hardware address for the client.
D. It specifies a unique identifier that is used only for BOOTP requests.
E. It requires that you specify the hardware protocol.

Answer: AB

QUESTION 500
Refer to the exhibit. If router R1 is functioning as a DHCPv6 server and you enter the command show ipv6 dhcp binding, which two options are pieces of information in the output? (Choose two.)

A. The IA PD
B. The DUID
C. The prefix pool
D. The DNS server
E. The Rapid-Commit setting

Answer: AB

QUESTION 501
Which two statements about NPTv6 are true? (Choose two.)

A. The translation is invisible to applications that hard code IP information within the application logic.
B. It is a one-way stateful translation for the IPv6 address.
C. Translation is 1:1 at the network layer.
D. It is a two-way stateless translation for the network prefix.

Answer: CD

QUESTION 502
Which three protocols can use enhanced object tracking? (Choose three.)

A. HSRP
B. Proxy-ARP
C. VRRP

D. GLBP
E. NTP
F. DHCP

Answer: ACD

QUESTION 503
What are the three primary components of NetFlow? (Choose three.)

A. Flow caching
B. A flow collector
C. The data analyzer
D. Flow sequence numbers
E. Cisco Express Forwarding
F. Multicast

Answer: ABC

QUESTION 504
Which two options are actions that EEM can perform after detecting an event? (Choose two.)

A. Place a port in err-disabled.
B. Generate an SNMP trap.
C. Reload the Cisco IOS Software.
D. Send an SMS.

Answer: BC

QUESTION 505
On which three options can Cisco PfR base its traffic routing? (Choose three.)

A. Time of day
B. An access list with permit or deny statements
C. Load-balancing requirements
D. Network performance
E. User-defined link capacity thresholds
F. Router IOS version

Answer: CDE

QUESTION 506
Which two routing protocols are not directly supported by Cisco PfR route control, and rely on the Cisco PfR subfeature PIRO? (Choose two.)

A. BGP
B. EIGRP
C. Static routing
D. OSPF

E.   IS-IS

Answer: DE

QUESTION 507
Which two options does Cisco PfR use to control the entrance link selection with inbound optimization? (Choose two.)

A.   Prepend extra AS hops to the BGP prefix.
B.   Advertise more specific BGP prefixes (longer mask).
C.   Add (prepend) one or more communities to the prefix that is advertised by BGP.
D.   Have BGP dampen the prefix.

Answer: AC

QUESTION 508
While you are troubleshooting network performance issues, you notice that a switch is periodically flooding all unicast traffic. Further investigation reveals that periodically the switch is also having spikes in CPU utilization, causing the MAC address table to be flushed and relearned. What is the most likely cause of this issue?

A.   a routing protocol that is flooding updates
B.   a flapping port that is generating BPDUs with the TCN bit set
C.   STP is not running on the switch
D.   a user that is downloading the output of the show-tech command
E.   a corrupted switch CAM table

Answer: B

QUESTION 509
Your network is suffering from regular outages. After troubleshooting, you learn that the transmit lead of a fiber uplink was damaged. Which two features can prevent the same issues in the future? (Choose two.)

A.   root guard
B.   loop guard
C.   BPDU guard
D.   UDLD
E.   BPDU skew detection

Answer: BD

QUESTION 510
Which feature would prevent guest users from gaining network access by unplugging an IP phone and connecting a laptop computer?

A.   IPSec VPN
B.   SSL VPN

C. port security
D. port security with statically configured MAC addresses
E. private VLANs

Answer: D

QUESTION 511
Which two statements are true about the role of split horizon? (Choose two.)

A. It is a function used by routing protocols to install routes into routing table
B. It is a function that prevents the advertising of routes over an interface that the router is using to reach a route
C. Its function is to help avoid routing loops.
D. It is a redistribution technique used by routing protocols

Answer: BC

QUESTION 512
Refer to the exhibit. Which result will the EEM applet in the exhibit produce?

```
event manager applet CCIE
event timer cron name CCIE cron-entry  */5 * * * *
action 1 cli command "en"
action 2 cli command "show log"
```

A. The output of show version will be executed every 5 hours.
B. The output of show log will be executed every 5 hours.
C. The output of show log will be executed every Friday.
D. The output of show log will be executed every 5 minutes.

Answer: B
Explanation:
The cron entry indicates 5 hours. So the output of show log will be executed every 5 hours.

QUESTION 513
Which two events occur when a packet is decapsulated in a GRE tunnel? (Choose two.)

A. The destination IPv4 address in the IPv4 payload is used to forward the packet.
B. The TTL of the payload packet is decremented.
C. The source IPv4 address in the IPv4 payload is used to forward the packet.
D. The TTL of the payload packet is incremented.
E. The version field in the GRE header is incremented.
F. The GRE keepalive mechanism is reset.

Answer: AB

QUESTION 514

Refer to the exhibit. How will traffic be split between the routers, assuming that there are many hosts on this subnet?

```
R100#show glbp
Ethernet0/0 - Group 150
  State is Active
  Virtual IP address is 10.1.1.150
  Preemption enabled, min delay 0 sec
  Active is local
  Standby is 10.1.1.101, priority 100 (expires in 8.128 sec)
  Priority 150 (configured)
  Weighting 50 (configured 50), thresholds: lower 1, upper 50
  Load balancing: round-robin
  Group members:
    aabb.cc00.6400 (10.1.1.100) local
    aabb.cc00.6500 (10.1.1.101)
  There are 2 forwarders (1 active)
  Forwarder 1
    State is Active
      1 state change, last state change 00:07:56
    Redirection enabled
    Preemption enabled, min delay 30 sec
    Active is local, weighting 10
  Forwarder 2
    State is Listen
    Redirection enabled, 599.360 sec remaining (maximum 600 sec)
    Time to live: 14399.360 sec (maximum 14400 sec)
    Active is 10.1.1.101 (primary), weighting 30 (expires in 10.432 sec)
```
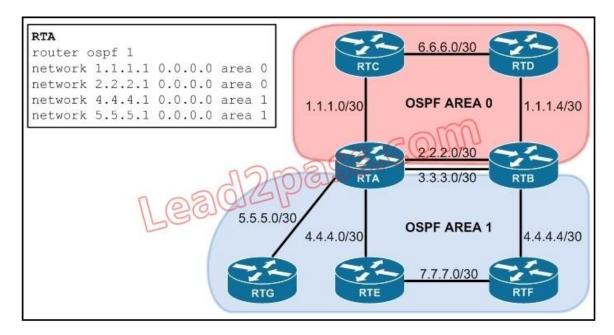
A. All traffic will be sent to the primary router (10.1.1.100).
B. Traffic will be split equally between the two routers (10.1.1.100 and 10.1.1.101).
C. Traffic will be split 25% (10.1.1.101) / 75% (10.1.1.100) between the two routers.
D. Traffic will be split 75% (10.1.1.101) / 25% (10.1.1.100) between the two routers.

Answer: D

QUESTION 515
Refer to the exhibit. A packet from RTD with destination RTG, is reaching RTB. What is the path this packet will take from RTB to reach RTG?

A. RTB - RTA - RTG
B. RTB - RTD - RTC - RTA - RTG
C. RTB - RTF - RTE - RTA - RTG
D. RTB will not be able to reach RTG since the OSPF configuration is wrong.

Answer: C
Explanation:
NOTE: I strongly suspect this question is wrong. There is no way to find the destination without additional information. So this is a wrong question. The exhibit doesn't provide enough information to calculate the path of the packet

QUESTION 516
Refer to the exhibit. Which path is selected as best path?

A. path 1, because it is learned from IGP
B. path 1, because the metric is the lowest
C. path 2, because it is external
D. path 2, because it has the higher router ID

Answer: B
Explanation:
Metrics is a property of a route in computer networking, consisting of any value used by a routing protocol to determine whether one particular route should be chosen over another. The routing table stores only the best possible routes, while link-state or topological databases may store all other information as well. For example, Routing Information Protocol uses hopcount (number of hops) to determine the best possible route. The route will go in the direction of the gateway with the lowest metric (default gateway).

QUESTION 517
What is the first thing that happens when IPv6 is enabled on an interface on a host?

A. A router solicitation is sent on that interface.
B. There is a duplicate address detection on the host interface.
C. The link local address is assigned on the host interface.
D. A neighbor redirect message is sent on the host interface.

Answer: B
Explanation:
Duplicate address detection (DAD) is used to verify that an IPv6 home address is unique on the LAN before assigning the address to a physical interface (for example, QDIO).
z/OS Communications Server responds to other nodes doing DAD for IP addresses assigned to the interface.

QUESTION 518
What is the flooding scope of an OSPFv3 LSA, if the value of the S2 bit is set to 1 and the S1 bit is set to 0?

A. link local
B. area wide
C. AS wide
D. reserved

Answer: C

QUESTION 519
Refer to the exhibit. R1 is not learning about the 172.16.10.0 subnet from the BGP neighbor R2 (209.165.202.130). What can be done so that R1 will learn about this network?

A. Disable auto-summary on R2.
B. Configure an explicit network command for the 172.16.10.0 subnet on R2.
C. Subnet information cannot be passed between IBGP peers.
D. Disable auto-summary on R1.

Answer: B
Explanation:
By default, BGP does not accept subnets redistributed from IGP. To advertise and carry subnet routes in BGP, use an explicit network command or the no auto-summary command. If you disable auto-summarization and have not entered a network command, you will not advertise network routes for networks with subnet routes unless they contain a summary route.

QUESTION 520
Refer to the exhibit. After a link flap in the network, which two EIGRP neighbors will not be queried for alternative paths? (Choose two.)

```
r13#show ip eigrp nei det
IP-EIGRP neighbors for process 100
H   Address                 Interface       Hold Uptime    SRTT   RTO  Q   Seq
                                            (sec)          (ms)        Cnt Num
1   192.168.1.1             Et0/0           9999 00:20:26     9   200  0   9
    Version 12.4/1.2, Retrans: 0, Retries: 0, Prefixes: 1
4   192.168.3.7             Et0/2             10 00:21:07    25   200  0   27
    Version 12.4/1.2, Retrans: 0, Retries: 0
    Stub Peer Advertising ( STATIC ) Routes
    Suppressing queries
3   192.168.3.8             Et0/2             12 00:21:26    26   200  0   25
    Version 12.4/1.2, Retrans: 0, Retries: 0
    Stub Peer Advertising ( SUMMARY ) Routes
    Suppressing queries
2   192.168.3.6             Et0/2             14 00:33:41    16   200  0   19
    Restart time 00:33:14
    Version 12.4/1.2, Retrans: 0, Retries: 0, Prefixes: 1
0   192.168.2.1             Et0/1           9999 00:43:06    17   200  0   6
    Restart time 00:33:14
    Version 12.4/1.2, Retrans: 2, Retries: 0, Prefixes: 1
5   192.168.3.9             Et0/2             11 00:33:41    16   200  0   19
    Restart time 00:33:14
    Version 12.4/1.2, Retrans: 0, Retries: 0, Prefixes: 1
```

A. 192.168.1.1
B. 192.168.3.7
C. 192.168.3.8
D. 192.168.3.6
E. 192.168.2.1
F. 192.168.3.9

Answer: BC
Explanation:
Both 192.168.3.7 & 192.168.3.8 are in an EIGRP Stub area
The Enhanced Interior Gateway Routing Protocol (EIGRP) Stub Routing feature improves network stability, reduces resource utilization, and simplifies stub router configuration. Stub routing is commonly used in a hub and spoke network topology. In a hub and spoke network, one or more end (stub) networks are connected to a remote router (the spoke) that is connected to one or more distribution routers (the hub). The remote router is adjacent only to one or more

distribution routers. The only route for IP traffic to follow into the remote router is through a distribution router. This type of configuration is commonly used in WAN topologies where the distribution router is directly connected to a WAN. The distribution router can be connected to many more remote routers. Often, the distribution router will be connected to 100 or more remote routers. In a hub and spoke topology, the remote router must forward all nonlocal traffic to a distribution router, so it becomes unnecessary for the remote router to hold a complete routing table. Generally, the distribution router need not send anything more than a default route to the remote router.

When using the EIGRP Stub Routing feature, you need to configure the distribution and remote routers to use EIGRP, and to configure only the remote router as a stub. Only specified routes are propagated from the remote (stub) router. The router responds to queries for summaries, connected routes, redistributed static routes, external routes, and internal routes with the message "inaccessible." A router that is configured as a stub will send a special peer information packet to all neighboring routers to report its status as a stub router. Any neighbor that receives a packet informing it of the stub status will not query the stub router for any routes, and a router that has a stub peer will not query that peer. The stub router will depend on the distribution router to send the proper updates to all peers.

QUESTION 521
Refer to the exhibit. Why is AS 65333 in parentheses?

A. It is an external AS.
B. It is a confederation AS.
C. It is the AS of a route reflector.
D. It is our own AS.
E. A route map has been applied to this route.
F. The BGP next hop is unreachable.

Answer: B
Explanation:
The AS numbers that are part of the confederation are grouped between parentheses and are replaced by the confederation identifier (the real AS number) in nonconfederation eBGP sessions. .

QUESTION 522
Refer to the exhibit. Which action would make the router the active VRRP router?

```
Router#show vrrp
Ethernet0/0 - Group 30
   State is Backup
   Virtual IP address is 10.1.1.30
   Virtual MAC address is 0000.5e00.011e
   Advertisement interval is 1.000 sec
   Preemption enabled
   Priority is 45   (cfgd 100)
      Track object 1 state Down decrement 55
      Track object 2 state Up decrement 55
   Master Router is 10.1.1.101, priority is 50
   Master Advertisement interval is 1.000 sec
   Master Down interval is 3.414 sec (expires in 2.982 sec)

Router#show run | inc track
track 1 interface Serial1/0 line-protocol
track 2 interface Serial1/1 line-protocol
```

A. Recover interface Serial 1/0.
B. Increase priority in the configuration to 100.
C. Change the interface tracking priority to 100.
D. Recover interface Serial 1/1.

Answer: A
Explanation:
As VRRP Group 30 is configured with preemption all that is required is that the VRRP Priority be higher than that of the current active VRRP router and the current master router priority is 50.

QUESTION 523
Refer to the Exhibit. The displayed QoS configuration has been configured on a router.
IPv6 is being implemented on the router, and it is required to convert the QoS policy to support both IPv4 and IPv6 on the same class.
Which alternative configuration would allow matching DSCP AF41 for both IPv4 and IPv6 on the same class map?

```
!
class-map match-all CLASS1
 match ip dscp af41
!
```

A. Class-map match-all CLASS1
   Match dscp af41
B. Class-map match-all CLASS1
   Match ip dscp af41
   Match ipv6 dscp af41
C. Class-map match-any CLASS1
   Match ip dscp af41
   Match ipv6 dscp af41
D. Class-map match-any CLASS1

Match qos-group af41

Answer: A

QUESTION 524
Voice quality is bad due to high delay and jitter on a link. Which two actions will improve the quality of voice calls? (Choose two.)

A. Increase the queue size of the voice class.
B. Guarantee bandwidth during congestion to the voice class with a bandwidth command.
C. Increase the tx-ring of the egress interface.
D. Implement LLQ for the voice class.
E. Decrease the rx-ring of the egress interface.
F. Decrease the queue size of the voice class.

Answer: DF

QUESTION 525
Refer to the exhibit. On what will the config class-map VOICE match?
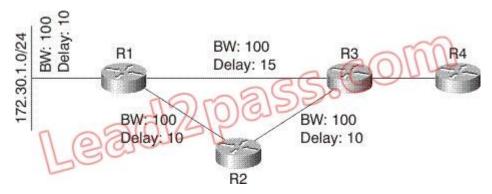
```
access-list 101 permit udp any any range 16384 32767
!
Class-map match-any  VOICE
Match access-group  101
Match ip dscp ef
```

A. only on UDP traffic between port ranges 16384 and 32767
B. only on DSCP EF traffic
C. on UDP traffic between port ranges 16384 and 32767, and on DSCP EF traffic
D. only on EF traffic that is UDP and within the UDP range of 16384 and 32767

Answer: C

QUESTION 526
Refer to the exhibit. Assuming that the routing protocol for this network is EIGRP, if the link between R1 and R3 failed, what would R4 receive from R3?

A. R4 would receive an update noting R3's higher cost to reach 172.30.1.0/24.

B. R4 would not receive any updates or queries, since R3 would simply move to the path through R2.
C. R4 would receive a query, since R3 would mark 172.30.1.0/24 as active when the link between R1 and R4 failed.
D. R4 would not receive any packets, since R3 is not using the link to R1 to reach 172.30.1.0/24.

Answer: A

QUESTION 527
Which three statements accurately describe a link-state routing protocol? (Choose three.)

A. Each router sends routing information to all nodes in the flooding domain.
B. Each router sends all or some portion of its routing table to neighboring routers.
C. Each router individually builds a picture of the entire flooding domain.
D. Each router has knowledge of all other routers in the flooding domain.
E. Each router is only aware of neighboring routers.
F. Each router installs routes directly from the routing updates into the routing table.

Answer: ACD

QUESTION 528
Refer to the exhibit. What is true about the configuration in this exhibit?

```
class-map type inspect match-all c1
 match access-group 101
 match protocol http
policy-map type inspect p1
 class type inspect c1
 drop
```

A. It is an invalid configuration because it includes both an application layer match and and a Layer 3 ACL.
B. It will create a class map that matches the content of ACL 101 and the HTTP protocol, and will then create an inspection policy that will drop packets at the class map.
C. It will create a class map that matches the content of ACL 101 and the HTTP protocol, and will then create an inspection policy that will allow packets at the class map.
D. It will create a class map that matches the content of ACL 101 or the HTTP protocol (depending on the zone of the interface), and will then create an inspection policy that will drop packets at the class map.
E. It will create a class map that matches the content of ACL 101 or the HTTP protocol (depending on the zone of the interface), and will then create an inspection policy that will allow packets at the class map.
F. It is an invalid configuration because the class map and policy map names must match.

Answer: B

QUESTION 529
Refer to the exhibit. You are trying to police down to 100 Mb/s. While testing, you notice that you

rarely exceed 70-80 Mb/s. What do you need to change in your MQC configuration to allow for 100 Mb/s speeds?

A. Change the CIR value from 100 Mb/s to 200 Mb/s.
B. Change the Bc value to allow for a large enough burst.
C. Change the QoS queue from default to priority.
D. Change the exceed-action to transmit.

Answer: B
Explanation:
Burst size--Also called the Committed Burst (Bc) size, it specifies in bits (or bytes) per burst how much traffic can be sent within a given unit of time to not create scheduling concerns. (For a shaper, such as GTS, it specifies bits per burst; for a policer, such as CAR, it specifies bytes per burst.)

QUESTION 530
Which feature would prevent guest users from gaining network access by unplugging an IP phone
and connecting a laptop computer?

A. IPSec VPN
B. SSL VPN
C. port security
D. port security with statically configured MAC addresses
E. private VLANs

Answer: D

QUESTION 531
Which three statements about VTP version 3 are true? (Choose three.)

A. It supports other databases in addition to VLAN.
B. It supports VLANs up to 4095.
C. It supports the synchronization of switch configuration templates between switches in the domain.
D. It supports the transfer of information about private VLAN structures.

E. It supports the transfer of PVST+ configuration information.
F. It supports RSTP.

Answer: ABD

QUESTION 532
In an STP domain, which two statements are true for a nonroot switch, when it receives a configuration BPDU from the root bridge with the TC bit set? (Choose two.)

A. It sets the MAC table aging time to max_age + forward_delay time.
B. It sets the MAC table aging time to forward_delay time.
C. It recalculates the STP topology upon receiving topology change notification from the root switch.
D. It receives the topology change BPDU on both forwarding and blocking ports.

Answer: BD

QUESTION 533
Which two statements about RSTP and MSTP BPDUs are true? (Choose two.)

A. MSTP switches can detect boundary ports when they receive RSTP version 2 BPDUs.
B. MSTP switches can detect boundary ports when they receive RSTP version 1 BPDUs.
C. RSTP switches can process MSTP version 3 BPDUs.
D. When all boundary switches are running RSTP, MST sends only version 0 configuration BPDUs.

Answer: AC

QUESTION 534
Which three options are sources from which a SPAN session can copy traffic? (Choose three.)

A. ports
B. EtherChannels
C. VLANs
D. subnets
E. primary IP addresses
F. secondary IP addresses

Answer: ABC

QUESTION 535
Which three capabilities are provided by MLD snooping? (Choose three.)

A. dynamic port learning
B. IPv6 multicast router discovery
C. user-configured ports age out automatically
D. a 5-minute aging timer
E. flooding control packets to the egress VLAN
F. a 60-second aging timer

Answer: ABD

QUESTION 536
Refer to the exhibit. Which two statements about the implementation are true? (Choose two.)

```
Interface Serial0/1
    ppp multilink
    multilink-group 2
    ppp multilink interleave
    ppp multilink multiclass
```

A. The PPP multilink protocol header is omitted on delay-sensitive packets.
B. The maximum number of fragments is 1.
C. Small real-time packets are multilink-encapsulated.
D. A transmit queue is provided for smaller packets.

Answer: AD

QUESTION 537
Which two statements are characteristics of Ethernet private LAN circuits? (Choose two.)

A. They support communication between two or more customer endpoints.
B. They utilize more than one bridge domain.
C. They support point-to-multipoint EVC.
D. They support multipoint-to-multipoint EVC.

Answer: AD

QUESTION 538
Which two statements about Inverse ARP are true? (Choose two.)
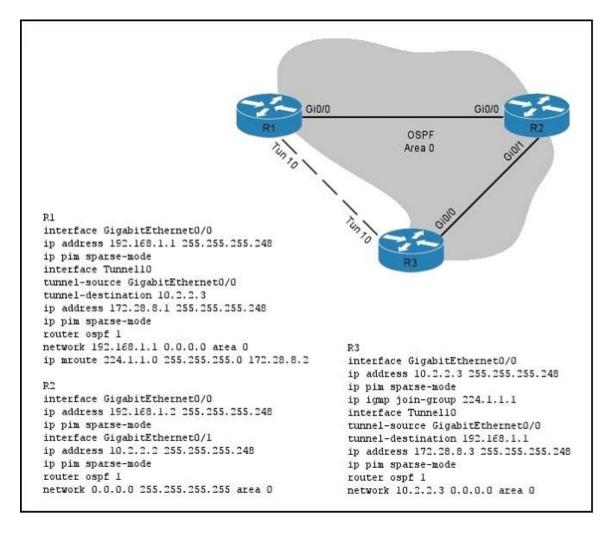
A. It uses the same operation code as ARP.
B. It uses the same packet format as ARP.
C. It uses ARP stuffing.
D. It supports static mapping.
E. It translates Layer 2 addresses to Layer 3 addresses.
F. It translates Layer 3 addresses to Layer 2 addresses.

Answer: BE

QUESTION 539
Refer to the exhibit. R3 is failing to join the multicast group 224.1.1.1 that is sourcing from R1.
Which two actions can you take to allow multicast traffic to flow correctly? (Choose two.)

R1
interface GigabitEthernet0/0
ip address 192.168.1.1 255.255.255.248
ip pim sparse-mode
interface Tunnel10
tunnel-source GigabitEthernet0/0
tunnel-destination 10.2.2.3
ip address 172.28.8.1 255.255.255.248
ip pim sparse-mode
router ospf 1
network 192.168.1.1 0.0.0.0 area 0
ip mroute 224.1.1.0 255.255.255.0 172.28.8.2

R2
interface GigabitEthernet0/0
ip address 192.168.1.2 255.255.255.248
ip pim sparse-mode
interface GigabitEthernet0/1
ip address 10.2.2.2 255.255.255.248
ip pim sparse-mode
router ospf 1
network 0.0.0.0 255.255.255.255 area 0

R3
interface GigabitEthernet0/0
ip address 10.2.2.3 255.255.255.248
ip pim sparse-mode
ip igmp join-group 224.1.1.1
interface Tunnel10
tunnel-source GigabitEthernet0/0
tunnel-destination 192.168.1.1
ip address 172.28.8.3 255.255.255.248
ip pim sparse-mode
router ospf 1
network 10.2.2.3 0.0.0.0 area 0

A. Remove the static multicast route on R1.
B. Configure OSPF on R1 and R3 to include the tunnel interfaces.
C. Add an additional static multicast route on R2 for multicast group 224.1.1.1 toward R3.
D. Replace the static multicast route on R1 to send traffic toward R2.
E. Remove the static unicast route on R1.
F. Add an additional static unicast route on R2 toward the loopback interface of R3.

Answer: AB

QUESTION 540
Which two modes of operation does BFD support? (Choose two.)

A. synchronous mode
B. asynchronous mode
C. demand mode
D. echo mode
E. aggressive mode
F. passive mode

Answer: BC

QUESTION 541
Which two loop-prevention mechanisms are implemented in BGP? (Choose two.)

A. A route with its own AS in the AS_PATH is dropped automatically if the route reenters its own AS.
B. A route with its own cluster ID in the CLUSTER_LIST is dropped automatically when the route reenters its own AS.
C. The command bgp allowas-in enables a route with its own AS_PATH to be dropped when it reenters its own AS.
D. The command bgp bestpath as-path ignore enables the strict checking of AS_PATH so that they drop routes with their own AS in the AS_PATH.
E. The command bgp bestpath med missing-as-worst assigns the smallest possible MED, which directly prevents a loop.

Answer: AB

QUESTION 542
Refer to the exhibit. RIPv2 authentication is failing on a device with this configuration. Which two actions can you take to enable it? (Choose two.)

```
key chain kcl
    key 1
    key-string ripauth
interface Serial0
    ip address 10.1.1.1 255.255.255.252
    ip rip authentication key-chain kcl
router rip
    version 2
    network 10.0.0.0
```

A. Set the RIP authentication mode to text.
B. Set the RIP authentication mode to MD5.
C. Configure the password encryption for the key.
D. Set the password encryption to AES.

Answer: AB

QUESTION 543
Which three routing protocols utilize TLVs? (Choose three.)

A. BGP
B. IS-IS
C. ODR
D. OSPF
E. EIGRP
F. RIP

Answer: ABE

QUESTION 544
Which two statements about the command distance bgp 90 60 120 are true? (Choose two.)

A. Implementing the command is a Cisco best practice.
B. The external distance it sets is preferred over the internal distance.
C. The internal distance it sets is preferred over the external distance.
D. The local distance it sets may conflict with the EIGRP administrative distance.
E. The internal distance it sets may conflict with the EIGRP administrative distance.
F. The local distance it sets may conflict with the RIP administrative distance.

Answer: CF

QUESTION 545
Refer to the exhibit. Route exchange is failing on a PE edge device configured with this VRF-Lite. Which action can you take to correct the problem?

```
vrf definition v1                              router ospfv3 1
    rd 1:1
address-family ipv4                            address-family ipv6 unicast vrf v2
    exit-address-family                            router-id 192.168.2.1
address-family ipv6                            exit-address-family
    exit-address-family
                                               address-family ipv4 unicast vrf v1
vrf definition v2                                  router-id 192.168.1.4
    rd 2:2                                     exit-address-family
address-family ipv6
    exit-address-family                        address-family ipv6 unicast vrf v1
                                                   router-id 192.168.1.1
interface FastEthernet0/0                      exit-address-family
    no ip address
interface FastEthernet0/0.100
    encapsulation dot1Q 100
    vrf forwarding v1
    ip address 192.168.1.1 255.255.255.0
    ipv6 enable
    ospfv3 1 ipv6 area 0
    ospfv3 1 ipv4 area 0
interface FastEthernet0/0.200
    encapsulation dot1Q 200
    vrf forwarding v2
    ipv6 enable
    ospfv3 1 ipv6 area 0
interface FastEthernet0/1
    vrf forwarding v1
    ip address 10.1.1.1 255.255.255.0
    ipv6 enable
    ospfv3 1 ipv6 area 1
    ospfv3 1 ipv4 area 0
    no keepalive
interface FastEthernet0/2
    vrf forwarding v2
    no ip address
    ipv6 address 2001:DB8:1::1
    ipv6 enable
    ospfv3 1 ipv6 area 1
```

A. Configure the vrf-lite capability under the OSPF address families.

B. Correct the route descriptors.
C. Correct the OSPF router-ids.
D. Configure the control plane with a larger memory allocation to allow the device to appear in the routing table.

Answer: A

QUESTION 546
Refer to the exhibit. Which option is the result of this configuration?

```
router ospf 1
network 192.168.10.0 0.0.0.255 area 0
network 172.22.19.0 0.0.0.255 area 15
area 15 range 192.168.0.0 255.255.0.0 not-advertise
!
```

A. Devices in OSPF area 15 can reach the summary route 192.168.0.0/16 and its more specific subnets.
B. Devices in OSPF area 15 can reach only the more specific routes of 192.168.0.0/16.
C. Devices in OSPF area 0 can reach the summary route 192.168.0.0/16 and its more specific subnets.
D. Devices in OSPF area 0 can reach only the summary route of 192.168.0.0/16.

Answer: A

QUESTION 547
Which two technologies are supported by EIGRP? (Choose two.)

A. clear-text authentication
B. MD5 authentication
C. stub routing
D. multiple areas

Answer: BC

QUESTION 548
How does having an EIGRP feasible successor speed up convergence?

A. EIGRP sends queries only if there is a feasible successor, which decreases the number of routers that are involved in convergence.
B. EIGRP sends queries only if there is not a feasible successor, which causes less control traffic to compete with data.
C. EIGRP immediately installs the loop-free alternative path in the RIB.
D. EIGRP preinstalls the feasible successor in the RIB in all cases, which causes traffic to switch more quickly.

Answer: C

QUESTION 549
Which two options are ways in which an OSPFv3 router handles hello packets with a clear address-family bit? (Choose two.)

A. IPv4 unicast packets are discarded.
B. IPv6 unicast packets are discarded.
C. IPv4 unicast packets are forwarded.
D. IPv6 unicast packets are forwarded.

Answer: AD

QUESTION 550
Which two statements about OSPF route types are true? (Choose two.)

A. The cost of an external type 2 route is the sum of the external and internal costs.
B. The cost of an external type 2 route is the same as the external cost.
C. Intra-area routes originate outside of their area.
D. Inter-area routes originate inside their area.
E. The cost of an external type 1 route is the same as the internal cost.
F. For routes to the same destination, external type 1 routes are preferred over external type 2 routes.

Answer: BF

QUESTION 551
A company is multihomed to several Internet providers using EBGP. Which two measures guarantee that the network of the company does not become a transit AS for Internet traffic? (Choose two.)

A. Prepend three times the AS number of the company to the AS path list.
B. Add the community NO_EXPORT when sending updates to EBGP neighbors.
C. Write AS-path access-list which permits one AS long paths only and use it to filter updates sent to EBGP neighbors.
D. Add the community NO_EXPORT when receiving updates from EBGP neighbors.

Answer: CD

QUESTION 552
Which BGP feature allows a router to maintain its current BGP configuration while it advertises a different AS number to new connections?

A. local-AS
B. next-hop-self
C. allow-AS in
D. soft reset

Answer: A

QUESTION 553
Which problem can result when private AS numbers are included in advertisements that are sent to the global Internet BGP table?

A. The prefixes sent with private AS numbers are always discarded on the Internet.
B. The prefixes sent with private AS numbers are always tagged as invalid on the Internet.
C. The prefixes sent with private AS numbers lack uniqueness, which can lead to a loss of connectivity.
D. The prefixes sent with private AS numbers are sometimes tagged as invalid on the Internet.

Answer: C

QUESTION 554
Which two statements about the BGP community attribute are true? (Choose two.)

A. Routers send the community attribute to all BGP neighbors automatically.
B. A router can change a received community attribute before advertising it to peers.
C. It is a well-known, discretionary BGP attribute.
D. It is an optional transitive BGP attribute.
E. A prefix can support only one community attribute.

Answer: BD

QUESTION 555
Refer to the exhibit. Which AS paths are matched by this access list?

```
ip as-path access-list 1 permit ^64496_[0-9]*$
```

A. the origin AS 64496 only
B. the origin AS 64496 and any ASs after AS 64496
C. the directly attached AS 64496 and any ASs directly attached to AS 64496
D. the directly attached AS 64496 and any longer AS paths

Answer: C

QUESTION 556
Which two features improve BGP convergence? (Choose two.)

A. next-hop address tracking
B. additional paths
C. advertise map
D. communities
E. soft reconfiguration

Answer: AB

QUESTION 557
Refer to the exhibit. The spokes of the DMVPN with the given configuration are having QoS issues.
Which two actions can you take to resolve the problem? (Choose two.)

```
crypto isakmp policy 1
    authentication pre-share
crypto isakmp key dmvpn address 0.0.0.0 0.0.0.0
crypto ipsec transform-set vpntrans ah-sha-hmac esp-aes 256 esp-sha-hmac
crypto ipsec profile DMVPN-PROF
    set transform-set vpntrans

policy-map SHAPE
    class class-default
        shape average 200000

interface Loopback0
    ip address 10.1.1.1 255.255.255.0

interface Tunnel0
    ip address 192.168.1.1 255.255.255.0
    no ip next-hop-self eigrp 1
    ip nhrp authentication dmvpn
    ip nhrp map multicast dynamic
    ip nhrp network-id 99
    ip tcp adjust-mss 1360
    no ip split-horizon eigrp 1
    tunnel source Serial1/0
    tunnel mode gre multipoint
    tunnel protection ipsec profile DMVPN-PROF

interface Serial1/0
    ip address 172.16.1.1 255.255.255.248
    encapsulation frame-relay
frame-relay inverse-arp

router eigrp 1
    network 10.0.0.0
    network 192.168.1.0
```

A. Configure qos pre-classify on the tunnel interface.
B. Configure an NHRP group on the tunnel interface and associate it to a QoS policy.
C. Modify the configuration of the IPsec policy to accept QoS policies.
D. Manually configure a QoS policy on the serial interface.
E. Configure the bandwidth statement on the tunnel interface.
F. Configure the bandwidth statement on the serial interface.

Answer: AB

QUESTION 558
Which three statements about the route preference of IS-IS are true? (Choose three.)

A.   An L1 path is preferred over an L2 path.
B.   An L2 path is preferred over an L1 path.
C.   Within each level, a path that supports optional metrics is preferred over a path that supports only the default metric.
D.   Within each level of metric support, the path with the lowest metric is preferred.
E.   The Cisco IS-IS implementation usually performs equal cost path load balancing on up to eight paths.
F.   Both L1 and L2 routes will be installed in the routing table at the same time.

Answer: ACD

QUESTION 559
Refer to the exhibit. Which three statements about the R1 configuration are true? (Choose three.)

```
R1#show mpls l2transport vc 1611 detail

Local interface: Gi4/0/2 up, line protocol up, Eth VLAN 1611 up
    Destination address: 172.16.12.70, VC ID: 1611, VC status: down
        Output interface: none, imposed label stack {}
        Preferred path: not configured
        Default path: no route
        No adjacency
    Create time: 4w2d, last status change time: 4w2d
    Signaling protocol: LDP, peer 172.16.12.70:0 up
        Targeted Hello: 172.16.192.80(LDP Id) -> 172.16.12.70
        Status TLV support (local/remote)    : enabled/unknown (no remote binding)
            Label/status state machine        : local ready, LruRnd
            Last local dataplane   status rcvd: no fault
            Last local SSS circuit status rcvd: no fault
            Last local SSS circuit status sent: not sent
            Last local  LDP TLV    status sent: no fault
            Last remote LDP TLV    status rcvd: unknown (no remote binding)
        MPLS VC labels: local 4006, remote unassigned
        Group ID: local 0, remote unknown
        MTU: local 1500, remote unknown
        Remote interface description:
    Sequencing: receive disabled, send disabled
    VC statistics:
        packet totals: receive 0, send 0
        byte totals:   receive 0, send 0
        packet drops:  receive 0, seq error 0, send 0
```

A.   The virtual circuit identifier is 1611 and the virtual circuit is down.
B.   The local label for the circuit is 4006.
C.   The targeted LDP session to the remote peer is up.
D.   The local label for the circuit is 1611.
E.   The virtual circuit identifier is 4006 and the virtual circuit is down.
F.   The circuit is using MPLS VC type 4.

Answer: ABC

QUESTION 560
Which two statements about 6VPE are true? (Choose two.)

A. It allows a service provider to use an existing MPLS network to provide VPN services to IPv6 customers.
B. It uses MP-BGP as the carrier protocol to transport IPv6 connectivity.
C. It provides IPv6 connectivity to MPLS-VPN customers when IPv6 overlay tunneling is also configured.
D. It allows a service provider to use an existing MPLS network to provide global addressing to their IPv6 customers.
E. It requires the configuration of a GRE tunnel tagged with a VLAN ID.
F. It allows a service provider to use an existing L2TPv3 network to provide VPN services to IPv6 customers.

Answer: AB

QUESTION 561
Which statement about OTV is true?

A. The overlay interface becomes active only when configuration is complete and it is manually enabled.
B. OTV data groups can operate only in PIM sparse-mode.
C. The overlay interface becomes active immediately when it is configured.
D. The interface facing the OTV groups must be configured with the highest MTU possible.

Answer: A

QUESTION 562
Refer to the exhibit. Which two configuration changes enable the user admin to log in to the device? (Choose two.)

```
username admin privilege 15 password SECUREPASSWORD
aaa new-model
aaa authentication login default group tacacs+ local-case
aaa authentication enable default group tacacs+ enable
aaa authorization console
aaa authorization exec default group tacacs+ if-authenticated
aaa authorization commands 1 default group tacacs+ local if-authenticated
aaa authorization commands 4 default group tacacs+ if-authenticated
aaa authorization commands 15 default group tacacs+ local if-authenticated
aaa accounting exec default start-stop group tacacs+
aaa accounting commands 1 default start-stop group tacacs+
aaa accounting commands 15 default start-stop group tacacs+
aaa session-id common
```

A. Configure the login authentication to be case-insensitive.
B. Configure the user admin with a password and appropriate privileges.
C. Configure the login authentication to be case-sensitive.
D. Modify the configuration to use a named group.

E. Configure additional login authentication under the terminal lines.

Answer: AB

QUESTION 563
Which two advantages does CoPP have over receive path ACLs? (Choose two.)

A. Only CoPP applies to IP packets and non-IP packets.
B. Only CoPP applies to receive destination IP packets.
C. A single instance of CoPP can be applied to all packets to the router, while rACLs require multiple instances.
D. Only CoPP can rate-limit packets.

Answer: AD

QUESTION 564
Which command drops packets with unknown source addresses until you remove a sufficient number of secure MAC addresses to drop below the maximum value, and also causes the Security Violation counter to increment?

A. switchport port-security violation protect
B. switchport port-security violation drop
C. switchport port-security violation shutdown
D. switchport port-security violation restrict

Answer: D

QUESTION 565
Which two tasks are required for configuring SNMP to send traps on a Cisco IOS device? (Choose two.)

A. Create access controls for an SNMP community.
B. Configure SNMP notifications.
C. Configure the SNMP agent.
D. Configure SNMP status monitoring and troubleshooting.
E. Configure SNMP server group names.
F. Configure the SNMP server engine ID.

Answer: AB

QUESTION 566
Which two statements about SNMP traps are true? (Choose two.)

A. They are sent by an agent after a specified event.
B. They are sent when solicited after a specified event.
C. They are equivalent to a community string.
D. They provide solicited data to the manager.
E. They are sent by a management station to an agent.
F. Vendor-specific traps can be configured.

Answer: AF

QUESTION 567
A configuration includes the line ip nbar port-map SSH tcp 22 23 443 8080. Which option describes the effect of this configuration line?

A. It configures NBAR to search for SSH using ports 22, 23, 443, and 8080.
B. It configures NBAR to allow SSH connections only on ports 22, 23, 443, and 8080.
C. It enables NBAR to inspect for SSH connections.
D. It creates a custom NBAR port-map named SSH and associates TCP ports 22, 23, 443, and 8080 to itself.

Answer: A

QUESTION 568
Which configuration sets a minimum quality of service on a Layer 2 access switch?

A. mls qos cos override
   mls qos cos 2
B. mls qos cos 2
C. mls qos trust cos
   mls qos cos 2
D. mls qos trust cos
E. mls qos trust dscp

Answer: A

QUESTION 569
Which three statements about GLBP are true? (Choose three.)

A. It uses a virtual MAC address that starts with 0070.b4.
B. It elects a single active virtual gateway to appoint and manage multiple active virtual forwarders.
C. It allows the configured virtual IP address to be used on a physical interface as well.
D. It uses a virtual MAC address that starts with 0070.4b.
E. It elects multiple active virtual gateways to appoint and manage a single active virtual forwarder.
F. Preemption is enabled for the configured active virtual gateway by default.

Answer: ABC

QUESTION 570
Refer to the exhibit. If the route to 10.1.1.1 is removed from the R2 routing table, which server becomes the master NTP server?

```
R2#show run | include ntp
ntp server 10.1.1.1 prefer
ntp server 10.3.3.3
ntp server 10.4.4.4
```

A. R2
B. the NTP server at 10.3.3.3
C. the NTP server at 10.4.4.4
D. the NTP server with the lowest stratum number
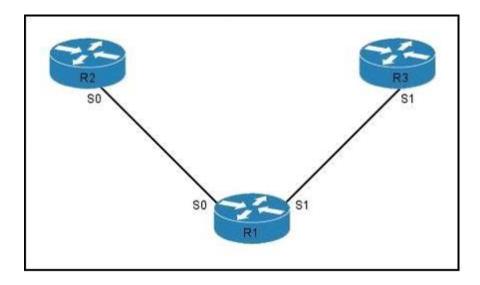
Answer: D

QUESTION 571
Refer to the exhibit. Which feature can R1 use to fail over from R2 to R3 if the address for R2 becomes unavailable?

A. object tracking
B. HSRP
C. GLBP
D. LACP

Answer: A

QUESTION 572
Refer to the exhibit. Which two options are effects of the given configuration? (Choose two.)

```
Router1#show run
interface FastEthernet0/0
    ip address 10.20.10.1 255.255.255.0
    ip route-cache flow

ip flow-export version 5 origin-as
ip flow-export destination 209.165.200.227 49152
```

A. It sets the data export destination to 209.165.200.227 on UDP port 49152.
B. It enables Cisco Express Forwarding on interface FastEthernet0/0.
C. It configures the export process to include the BGP peer AS of the router gathering the data.
D. It enables NetFlow switching on interface FastEthernet0/0.
E. It sets the data export destination to 209.165.200.227 on TCP port 49152.

Answer: AD

QUESTION 573
Which three options are components of an EEM CLI policy? (Choose three.)

A. Safe-Tcl
B. applet name
C. Fast Tcl
D. event
E. action
F. Tcl bytecode

Answer: BDE

QUESTION 574
Which option is a core event publisher for EEM?

A. Timer
B. Policy Director
C. Applet
D. Script
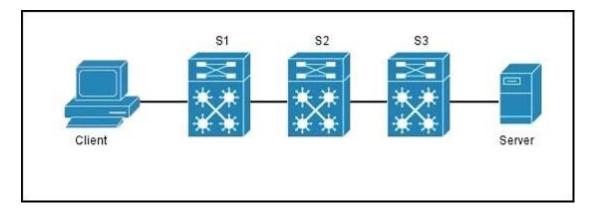
Answer: A

QUESTION 575
Refer to the exhibit. You are configuring the S1 switch for the switch port that connects to the client computer. Which configuration blocks users on the port from using more than 6 Mbps of traffic and marks the traffic for a class of service of 1?

A.
```
class-map match-all cos1
    match any
policy-map cos1
    class cos1
        set cos1
        police cir 6000000 bc 1125000 be 2250000 conform-action
            set-dscp-transmit cs1 exceed-action drop
            violate-action drop
```

B.
```
class-map match-any cos1
    match any
policy-map cos1
    class cos1
    police cir 6000000 bc 1125000 be 2250000 conform-action
        set-dscp-transmit cs1 exceed-action drop
        violate-action drop
```

C.
```
class-map match-all cos1
    match any
policy-map cos1
    class cos1
    set cos1
    policy cir 6000000 conform-action set-dscp-transmit cs1
        exceed-action permit violate-action permit
```

D.
```
class-map match-any cos1
    match any
policy-map cos1
    class cos1
    set cos1
    policy cir 6000000 conform-action transmit exceed-action
        permit violate-action drop
```

Answer: A

QUESTION 576
A TCP/IP host is able to transmit small amounts of data (typically less than 1500 bytes), but attempts to transmit larger amounts of data hang and then time out. What is the cause of this problem?

A. A link is flapping between two intermediate devices.
B. The processor of an intermediate router is averaging 90 percent utilization.
C. A port on the switch that is connected to the TCP/IP host is duplicating traffic and sending it to a port that has a sniffer attached.
D. There is a PMTUD failure in the network path.

Answer: D

QUESTION 577
Refer to the exhibit. ICMP Echo requests from host A are not reaching the intended destination on host B. What is the problem?

```
Internet Protocol Version 4, Src: 10.149.4.110 (10.149.4.110), Dst: 192.168.3.1 (192.168.3.1)
    Version: 4
    Header length: 20 bytes
    Differentiated Services Field: 0x00 (DSCP 0x00: Default; ECN: 0x00: Not-ECT (Not ECN-Capable Transport))
    Total Length: 60
    Identification: 0x64ac (25772)
    Flags: 0x00
    Fragment offset: 0
    Time to live: 1
    Protocol: ICMP (1)
    Header checksum: 0x8269 [correct]
    Source: 10.149.4.110 (10.149.4.110)
    Destination: 192.168.3.1 (192.168.3.1)
Internet Control Message Protocol
    Type: 8 (Echo (ping) request)
    Code: 0
    Checksum: 0x4d3d [correct]
    Identifier (BE): 1 (0x0001)
    Identifier (LE): 256 (0x0100)
    Sequence number (BE): 30 (0x001e)
    Sequence number (LE): 7680 (0x1e00)
    Data (32 bytes)

0000  61 62 63 64 65 66 67 68 69 6a 6b 6c 6d 6e 6f 70   abcdefghijklmnop
0010  71 72 73 74 75 76 77 61 62 63 64 65 66 67 68 69   qrstuvwabcdefghi
      Data: 6162636465666768696a6b6c6d6e6f707172737475767761...
      [Length: 32]
```

A. The ICMP payload is malformed.
B. The ICMP Identifier (BE) is invalid.
C. The negotiation of the connection failed.
D. The packet is dropped at the next hop.
E. The link is congested.

Answer: D

QUESTION 578
Refer to the exhibit. Which statement is true?

```
R101#show ip cache flow
[...]
SrcIf          SrcIPaddress     DstIf       DstIPaddress     Pr SrcP DstP  Pkts
Et0/0          10.0.0.1         Et0/0       15.0.0.2         01 0000 0800  2603
```

A. It is impossible for the destination interface to equal the source interface.
B. NAT on a stick is performed on interface Et0/0.
C. There is a potential routing loop.
D. This output represents a UDP flow or a TCP flow.

Answer: C

QUESTION 579
Which three conditions can cause excessive unicast flooding? (Choose three.)
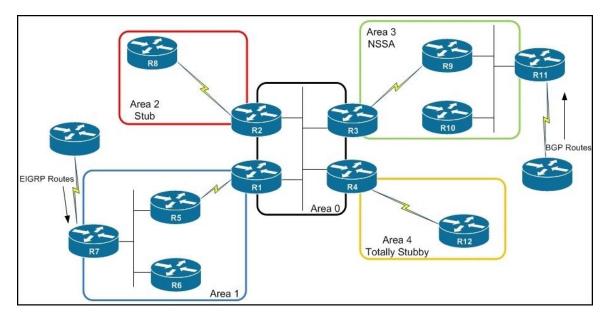
A. Asymmetric routing
B. Repeated TCNs
C. The use of HSRP
D. Frames sent to FFFF.FFFF.FFFF
E. MAC forwarding table overflow
F. The use of Unicast Reverse Path Forwarding

Answer: ABE

QUESTION 580
Refer to the exhibit. R10 in area 3 is not able to reach EIGRP routes that have been redistributed into OSPF on R7.
Which two actions can be taken to resolve this issue, while maintaining connectivity to BGP routes that are redistributed on r11? (Choose two)

A. Change area 3 from NSSA to a stub area.
B. Change area 3 from NSSA to a totally stubby area.

C. Change area 3 from NSSA to a normal area.
D. Change area 3 from NSSA to an NSSA totally stub area.

Answer: CD

QUESTION 581
Refer to the exhibit. A host on the Internet (150.1.1.1) must be represented to the internal network as a local IP address. While testing, the configuration does not seem to work.
What is wrong?

```
ip nat inside source static 10.1.1.1 200.1.1.1
ip nat outside source static 10.1.1.100 150.1.1.1
!
interface Ethernet0/0
 ip address 10.1.1.10 255.255.255.0
 ip nat inside
!
interface Serial0/0
 ip address 120.16.2.1 255.255.255.0
 ip nat outside
!
ip route 10.1.1.100 255.255.255.255 120.16.2.2
```

A. The nat inside translation is incorrect.
B. The static route is incorrect.
C. The nat outside translation is incorrect.
D. Instead of source nat, destination nat should be used on the inside.
E. The problem is not related to NAT configuration. The NAT configuration is correct.

Answer: C

QUESTION 582
Which congestion-avoidance or congestion-management technique can cause global synchronization?

A. Tail drop
B. Random early detection
C. Weighted random early detection
D. Weighted fair queuing

Answer: A

QUESTION 583
Which group of neighbors can be configured as a BGP peer group?

A. a group of iBGP neighbors that have the same outbound route policies
B. a group of iBGP and eBGP neighbors that have the same inbound distribute-list

C. a group of eBGP neighbors in the same autonomous system that have different outbound route policies
D. a group of iBGP neighbors that have different outbound route policies

Answer: A

QUESTION 584
Refer to the exhibit. Notice that debug ip bgp updates has been enabled. What can you conclude from the debug output?

```
BGP(0): 10.1.3.4 rcvd UPDATE w/ attr: nexthop 10.1.3.4, origin i,
metric 0, merged path 4, AS_PATH
BGP(0): 10.1.3.4 rcvd 10.100.1.1/32...duplicate ignored
```

A. This is the result of the clear ip bgp 10.1.3.4 in command.
B. This is the result of the clear ip bgp 10.1.3.4 out command.
C. BGP neighbor 10.1.3.4 performed a graceful restart.
D. BGP neighbor 10.1.3.4 established a new BGP session.

Answer: A

QUESTION 585
In the DiffServ model, which class represents the lowest priority with the lowest drop probability?

A. AF11
B. AF13
C. AF41
D. AF43

Answer: A

QUESTION 586
Which set of commands conditionally advertises 172.16.0.0/24 as long as 10.10.10.10/32 is in the routing table?

A.
```
neighbor x.x.x.x advertise-map ADV exist-map EXT
route-map ADV
 match IP address prefix-list ADV
!
route-map EXT
 match IP address prefix-list EXT
!
ip prefix-list EXT permit 172.16.0.0/24
!
ip prefix-list ADV permit 10.10.10.10/32
```

B.
```
neighbor x.x.x.x advertise-map ADV exist-map EXT
route-map ADV
 match IP address prefix-list ADV
!
route-map EXT
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```

C.
```
neighbor x.x.x.x advertise-map ADV
noute-map ADV
 match IP address prefix-list ADV
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```

D.
```
neighbor x.x.x.x advertise-map ADV
noute-map ADV
 match IP address prefix-list ADV
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```

Answer: B

QUESTION 587
Refer to the exhibit. Why is R2 unable to ping the loopback interface of R4?

BGP AS65001
Loopback0
3.3.3.3/24

R3

BGP AS65105
Loopback0
1.1.1.1/24

Loopback0
2.2.2.2/24

Loopback0
4.4.4.4/24

BGP AS65105
Loopback0
5.5.5.5/24

Fa0/0 Fa0/1
.3   .3

Fa0/0   10.1.23.0/24   10.1.34.0/24   Fa0/1
.2   .4

Fa0/1 Fa0/1
10.1.12.0/24

R1   R2
.1   .2

Fa0/0   Fa0/0
10.1.45.0/24

R4   R5
.4   .5

```
R2#sh ip bgp
BGP table version is 4, local router ID is 2.2.2.2
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
          r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

  Network       Next Hop      Metric LocPrf Weight Path
*> 1.1.1.0/24   10.1.12.1        0               0  65105 i
*> 2.2.2.0/24   0.0.0.0          0           32768 i
*>i3.3.3.0/24   10.1.23.3        0      100      0 i
*  i4.4.4.0/24   10.1.34.4        0      100      0 i
```

A. The local preference is too high.
B. The weight is too low.
C. The next hop is not reachable from R2.
D. The route originated from within the same AS.

Answer: C

QUESTION 588
Refer to the exhibit. Which two statements about the output are true? (Choose two.)

```
Switch# show spanning-tree vlan 1 detail

VLAN0001 is executing the ieee compatible Spanning Tree protocol
  Bridge Identifier has priority 32768, sysid 1, address 0007.0e8f.04c0
  Configured hello time 2, max age 20, forward delay 15
  Current root has priority 8192, address 0007.4f1c.e847
  Root port is 65 (GigabitEthernet2/1), cost of root path is 119
  Topology change flag not set, detected flag not set
  Number of topology changes 1 last change occurred 00:00:35 ago
          from GigabitEthernet1/1
  Times:  hold 1, topology change 35, notification 2
          hello 2, max age 20, forward delay 15
  Timers: hello 0, topology change 0, notification 0, aging 300
```

A. 802.1D spanning tree is being used.
B. Setting the priority of this switch to 0 for VLAN 1 would cause it to become the new root.
C. The hello, max-age, and forward delay timers are not set to their default values.
D. Spanning-tree PortFast is enabled on GigabitEthernet1/1.

Answer: AB

QUESTION 589
Which statement about the BGP originator ID is true?

A. The route reflector always sets the originator ID to its own router ID.
B. The route reflector sets the originator ID to the router ID of the route reflector client that injects the route into the AS.
C. The route reflector client that injects the route into the AS sets the originator ID to its own router ID.
D. The originator ID is set to match the cluster ID.

Answer: B

QUESTION 590
Refer to the exhibit. Which two statements are true? (Choose two.)

```
R5#show ip bgp
BGP table version is 24, local router ID is 10.100.1.5
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network          Next Hop            Metric LocPrf Weight Path
*> 10.100.1.1/32    10.1.1.1                 0    100      0 65001 23456 2 i
r> 10.100.1.2/32    10.1.2.1                 0    100      0 65001 23456 i
```
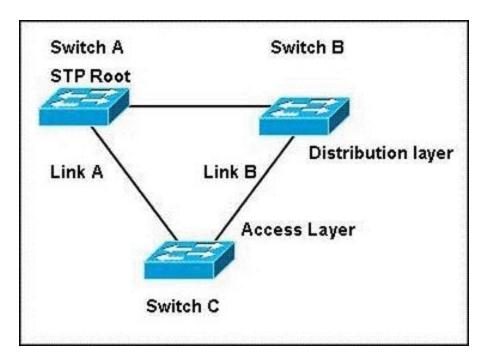
A. This router is not 4-byte autonomous system aware.
B. This router is 4-byte autonomous system aware.
C. The prefix 10.100.1.1/32 was learned through an autonomous system number with a length of 4 bytes, and this router is 4-byte autonomous system aware.
D. The prefix 10.100.1.1/32 was learned through an autonomous system number with a length of 4 bytes, and this router is not 4-byte autonomous system aware.
E. The prefix 10.100.1.1/32 was originated from a 4-byte autonomous system.

Answer: AD

QUESTION 591
Refer to the exhibit. Spanning tree protocol is running on all three switches. The switches are configured so that Link A is the active link, and Link B is the standby link. There is a problem occurring where Switch B starts forwarding on Link B causing a routing loop.

What is the likely cause of the problem?

A. PortFast is not enabled.
B. There is a port duplex mismatch.
C. MISTP is enabled without RSTP.
D. A single instance of STP is enabled instead of PVST.

Answer: B

QUESTION 592
While troubleshooting a BGP neighborship, you notice that the neighborship is constantly going up and down. What is causing the neighbors to flap?

A. The traffic-shaping and rate-limiting parameters are in correct.
B. There is a BGP timer mismatch between both neighbors.
C. There is a routing issue between both neighbors.
D. A firewall is blocking TCP packets with port 179.
E. There is a mismatch on the BGP update source between both neighbors.
F. EBGP multihop has not been configured on the neighbors.

Answer: A

QUESTION 593
Refer to the exhibit. An EBGP session is not established between Router1 and Router2.

Router 1

```
interface Loopback0
 ip address 2.2.2.2 255.255.255.255
!
interface Serial1
 ip address 10.10.10.1 255.255.255.0
!
router bgp 300
 neighbor 1.1.1.1 remote-as 400
 neighbor 1.1.1.1 ebgp-multihop 2
 neighbor 1.1.1.1 update-source Loopback0
```

Router 2

```
interface Loopback0
 ip address 1.1.1.1 255.255.255.255
!
interface Serial0
 ip address 10.10.10.2 255.255.255.0
!
router bgp 400
 neighbor 2.2.2.2 remote-as 300
 neighbor 2.2.2.2 ebgp-multihop 2
 neighbor 2.2.2.2 update-source Loopback0
```

A. The ebgp-multihop value must be increased to 3.
B. A static route needs to be added on Router1 and Router2.
C. The update-source loopback 0 command needs to be removed.
D. Use the serial interface IP addresses in the neighbor command, but leave the update source
    pointing to loopback 0.

Answer: B

QUESTION 594
While troubleshooting OSPF issues on a broadcast network, the network administrator notices
that some routers are stuck in two-way state.
What is the cause of this issue?
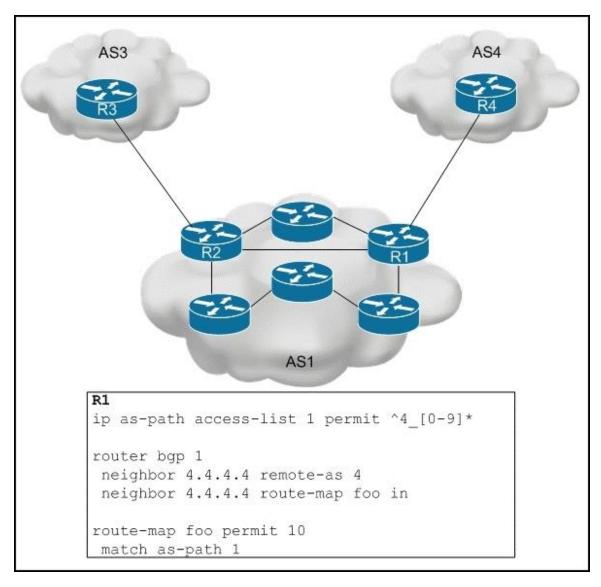
A. This is normal on OSPF broadcast network types.
B. The network type is configured incorrectly on these routers
C. There is an MTU mismatch between these routers and their neighbors.
D. This only happens to routers that have their OSPF priority set to 0.
E. Hello packets are not being received on these routers.

Answer: A

QUESTION 595

Refer to the exhibit. You want to set up an AS path filter that allows networks that originated from AS4, and autonomous systems that are directly attached to AS4, to enter R1. When you tested the filter, you noticed that something was wrong with it.


```
R1
ip as-path access-list 1 permit ^4_[0-9]*

router bgp 1
 neighbor 4.4.4.4 remote-as 4
 neighbor 4.4.4.4 route-map foo in

route-map foo permit 10
 match as-path 1
```

How can this be solved?

A. Change the regular expressing to ^4_0-9*$.
B. Change the regular expression to ^4_0-9+$.
C. Change the regular expression to ^4_0-9.*.
D. Change the regular expression to ^4_0-9.$.

Answer: A

QUESTION 596
Refer to the exhibit. While troubleshooting performance issues on your network, you notice that CPU utilization on your Layer 3 Internet switch is very high.
What can be done to solve this issue?

```
hostname SW1
!
ip subnet-zero
!
ip routing
!
spanning-tree extend system-id
!
interface FastEthernet0/1
 no ip address
!
!
!
interface FastEthernet0/48
 description To Internet_Router
 no switchport
 ip address 200.1.1.1 255.255.255.252
!
interface Vlan1
 no ip address
 shutdown
!
interface Vlan2
 description USER_VLAN
 ip address 10.1.2.1 255.255.255.0
!
interface Vlan3
 description SERVER_VLAN
 ip address 10.1.3.1 255.255.255.0
!
ip classless
!
ip route 0.0.0.0 0.0.0.0 FastEthernet0/48
!
line con 0
line vty 5 15
!
end
```

A. Use an SVI instead of a routed port to connect to the Internet router.
B. This is a capacity issue. Replace the switch with a high-performance Layer 3 switch.
C. Point the default static route to an IP address instead of a physical interface.
D. Configure CoPP on the Layer 3 switch.
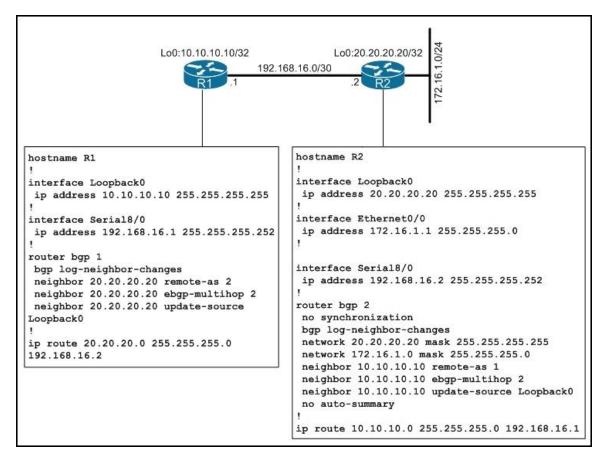
Answer: C

QUESTION 597
Refer to the exhibit. While troubleshooting BGP in this network, you notice that routes are
constantly flapping on R1.
What can be done to solve this issue?

A. Disable synchronization on R1 so that routes from R2 are installed in the routing table.
B. Disable autosummary on R1 so that routes from R2 are installed in routing table.
C. Increase the EBGP multihop count to 3.
D. Replace the static route on R1 with a specific route to 20.20.20.20/32.

Answer: D

QUESTION 598
While troubleshooting an OSPFv3 neighborship between two routers on a Frame Relay network, you notice that there is a mapping issue.
Which mapping needs to be established for OSPFv3 to establish a neighborship on Frame Relay?
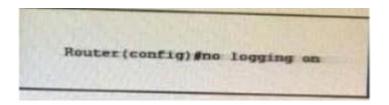
A. The all routers multicast address needs to be mapped to the correct DLCI.
B. The solicited node multicast address needs to be mapped to the correct DLCI.
C. The neighbor's link-local address needs to be mapped to the correct DLCI.
D. The all routers broadcast address needs to be mapped to the correct DLCI.

Answer: C

QUESTION 599
Refer to the Exhibit. Which is the effect of the given configuration?

Router(config)#no logging on
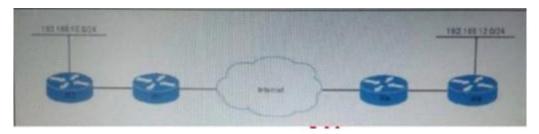
A. The router stops SNMP logging.
B. The router logs messages only to the console.
C. The router stops logging messages to the syslog server only.
D. The router log message only to the buffer.

Answer: C

QUESTION 600
Refer to the Exhibit. Which technology can allow Site A and Site B to run OSPF between sites ?

A. Point-to point circuit.
B. BGP
C. GRE Tunnel
D. Cisco MPLS TE

Answer: C

QUESTION 601
Which two statements about native VLANs are true? (Choose two.)

A. They require VTPv3.
B. They are used to forwarded untagged traffic only.
C. They are used to forward tagged traffic only.
D. They are configured in VLAN database mode.
E. They are configured under the trunk interface.
F. They are used to forward both tagged and untagged traffi

Answer: BE

QUESTION 602
When you deploy DMVPN, What is the purpose of the command key cisco test address
0.0.0.0.0.0.0.?

A. It is configured on the hub and spoke routers to establish peering
B. It is configured on the hub to set the pre-shared key for the spoke routers.
C. It is configured on the internet PE routers to traverse the ISP core.
D. It is configured on the spokes to router.

Answer: B

QUESTION 603
Which technology allows several switches to operate together as one device?

A. HSRP
B. VRRP
C. LACP
D. Stack Wise.

Answer: D

QUESTION 604
Which two statements about OSPFv3 are true? (Choose two.)

A. It supports the use of a cluster ID for loop prevention.
B. It supports unicast address families for IPv6 only.
C. It supports unicast address families for 1Pv4 and 1Pv6
D. It supports only one address family per instance.
E. It supports multicast address families for 1Pv4
F. It supports multicast address families for 1Pv6

Answer: CD

QUESTION 605
Which MLD message type does a host send to join rrulticast groups?
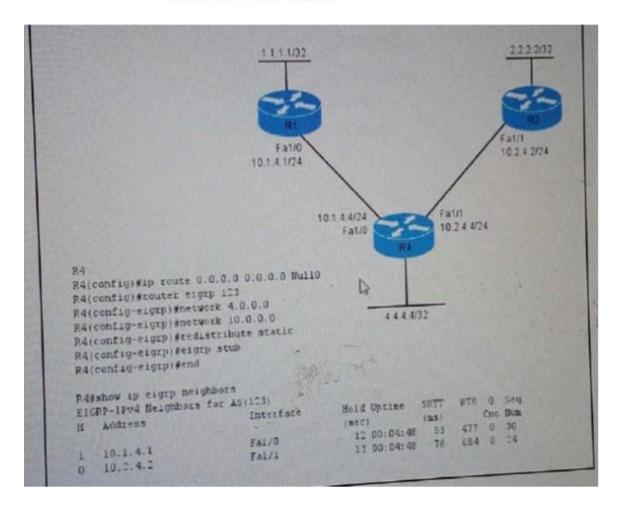
A. Join/prune
B. Hello
C. Query
D. Done
E. Report
F. Assert

Answer: E

QUESTION 606
Refer to the exhibit. If R41 configured as table?

A. 0.0.0.0/0, 4.4.4.4/32 and 10.2.4.0/24
B. 0.0.0.0/0 and 4.4.4.4/32 only .
C. 4.4.4.4/32 and 10.1.4.0/24 only
D. 4.4.4.4/32 and 10.2.4.0/24 only
E. 4.4.4.4/32,10.2.4.0/24 and 2.2.2.2/32

Answer: D

QUESTION 607
Which TCP features allows a client to request a specific packet that was lost?
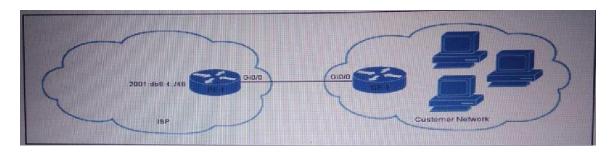
A. flow control
B. sliding window
C. fast recovery
D. selective acknowledgment

Answer: D

QUESTION 608
Refer to the Exhibit. Which configuration can you implement on PE-1 to allow CE-1 to receive delegated IP\16 prefixes?

A.
```
ipv6 local pool CE-1 2001:db8:4:8888::/48 32
ipv6 dhcp pool CE-1-DHCP
   prefix-delegation pool CE-1 lifetime infinite infinite
interface GigiabitEthernet0/0
   ipv6 address 2001:db8:4:822::1/64
   ipv6 dhcp server CE-1-DHCP
```

B.
```
ipv6 local pool CE-1 2001:db8:4:8888/56 48
ipv6 dhcp pool CE-1-DHCP
   prefix-delegation pool CE-1 lifetime infinite infinite
interface GigiabitEthernet0/0
   ipv6 address 2001:db8:4:822::1/64
   ipv6 dhcp server CE-1-DHCP
```

C.
```
ip local pool CE-1 2001:db8:4:8888::/64 48
ipv6 dhcp pool CE-1-DHCP
   prefix-delegation pool CE-1 lifetime infinite infinite
interface GigiabitEthernet0/0
   ipv6 address 2001:db8:4:822::1/64
   ipv6 dhcp server CE-1-DHCP
```

D.
```
ipv6 local pool CE-1 2001:db8:4:8888/49 56
ipv6 dhcp pool CE-1-DHCP
interface GigiabitEthernet0/0
   ipv6 address 2001:db8:4:822::1/64
   ipv6 dhcp server CE-1
```

E.
```
ipv6 local pool CE-1 2001:db8:4:8888::/48 56
ipv6 dhcp pool CE-1-DHCP
   prefix-delegation pool CE-1 lifetime infinite infinite
interface GigiabitEthernet0/0
   ipv6 address 2001:db8:4:822::1/64
   ipv6 dhcp server CE-1-DHCP
```

Answer: E

QUESTION 609
What are two major requirements for configuring an extended VLAN with VTPv2 (Choose two)

A. VLAN pruning must be enabled
B. The device must be operating in VTP transparent mode
C. The configuration must be made in global configuration mode
D. The VLAN must be configured in VLAN database mode

E. The reduced MAC address feature must be disabled

Answer: BC

QUESTION 610
Which two statements about MLD snooping are true?

A. MLD protocol messages can be sent in both IGMPv4 and ICMPv4 formats.
B. It supports private VLANs.
C. It limits the Layer 2 multicast traffic that is generate by routing protocols.
D. PFC modes support MLD version 2 only.
E. The MLD snooping querier requires the VLAN interface to be configured with an 1Pv6 address.

Answer: BE

QUESTION 611
Which IPv6 tunneling mechanism requires a service provider to nude one of its own native IPv6 blocks to guarantee that its IPv6 hosts will be reachable?

A. 6rd tunneling
B. Automatic 6to4 tunneling
C. manual ipv6ip tunneling
D. NAT-PT tunneling
E. Automatic 4to6 tunneling
F. ISATAP tunneling

Answer: A

QUESTION 612
Refer to the exhibit. After you applied this configuration to R1 and R 2 they failed to form an ISIS adjacency.
Which reason for the problem is most likely true?

```
R1
interface Serial1/0
   mtu 1514
   bandwidth 1000
   ip address 192.168.12.97 255.255.255.224
   ip router isis
   serial restart-delay 0
router isis
   net 01.0001.0000.0000.0001.00

R2
interface Serial1/0
   mtu 1518
   bandwidth 2000
   ip address 192.168.12.98 255.255.255.224
   ip router isis
   serial restart-delay 0
router isis
   net 01.0001.0000.0000.0002.00
```

A. The network statements are mismatched
B. The IP subnets are mismatched
C. T he bandwidth is mismatched
D. The MTUs are mismatched

Answer: D

QUESTION 613
Which two statements about cisco Express Forwarding are time? (Choose two)

A. Adjacency tables and Cisco Express Forwarding tables require packet switching.
B. Cisco Express Forwarding tables contain forwarding information on and adjacency tables contain reachability information.
C. Adjacency tables and Cisco Express forwarding tables can be separately.
D. Changing MAC header rewrite strings requires cache validation.
E. Cisco Express Forwarding tables contain reach ability information and adjacency tables contain forwarding information.

Answer: CE

QUESTION 614
0n which three options can Cisco PfR base its traffic routing? (Choose three)

A. Time of day
B. Network performance
C. Router IOS version
D. User-defined link capacity thresholds.

E.   An access list with perm it or deny statements.
F.   Load-balancing requirements.

Answer: BDF

QUESTION 615
Which three statements about BGP soft reconfiguration are true? (Choose three)

A.   Outbound soft reconfiguration requires additional configuration on the BGP neighbor
B.   Inbound soft reconfiguration requires additional memory
C.   Outbound soft reconfiguration requires additional memory
D.   Inbound soft reconfiguration stores an additional copy of the received from a neighbor before routing policies take effect
E.   Inbound soft reconfiguration requires additional memory
F.   Outbound soft reconfiguration stores an additional copy of the routes advertised to a neighbor before routing policies take effect

Answer: BEF

QUESTION 616
What mechanism should you choose to prevent unicast flooding?
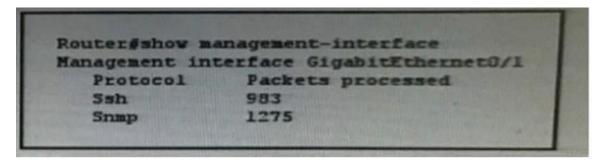
A.   Make sure that all end systems are connected to the network with a single physical connection.
B.   Use control plane policing (CPP) to limit unicast flooding.
C.   Configure the ARP cache timers to be longer than the switch forwarding cache (CAM) timers.
D.   Configure the switch forwarding cache (CAM) timers to be longer than the ARP cache timers.

Answer: D

QUESTION 617
Refer to the exhibit. Which two statements about the device configuration are true? (Choose two.)

A.   The device has control-plane protection enabled.
B.   The device implicitly allows Tel net connections.
C.   The GigabitEthemet0/1 interface of the device allows incoming SSH and SNMP connections.
D.   The device has management-plane protection enabled.
E.   The device allows SSH connections to its loopback interface.

Answer: CD

QUESTION 618
What are the two requirements for BGP to install a classful network into the BGP routing table? (Choose two.)

A. Synchronization is disabled.
B. The AS contains the entire classful network.
C. Auto-summary is enabled.
D. A classful network is statement with a classful mask is in the routing table.
E. A classful network statement with a lower administrative distance ~he routing table.
F. Synchronization is enabled.

Answer: CD

QUESTION 619
Which authentication types does OSPF support?

A. Null (or no authentication), clear text and MD5.
B. Clear text only
C. MD5only
D. MD5 and clear text
E. Null(or no authentication) and clear text

Answer: A

QUESTION 620
Which metric vectors are stored but are not used by default in EIG RP?

A. Reliability and delay
B. Load and reliability
C. Load and bandwidth
D. Bandwidth and del

Answer: B

QUESTION 621
What are three required attributes in a BGP update message? (select three)

A. AGGREGATOR
B. AS_PATH
C. ORIGIN
D. MED
E. NEXT_HOP

Answer: BCE

QUESTION 622
Refer to the exhibit. Which tag will be applied to 172.16.50.0/24 route?

```
ip prefix-list cciel seq 5 permit 172.16.0.0/17 le 24
ip prefix-list ccie2 seq 5 permit 172.16.128.0/17 le 24
ip prefix-list ccie3 seq 5 permit 172.17.128.0/17 le 24

route-map ccie permit 10
    match ip address prefix-list cciel
    set tag 10
route-map ccie permit 20
    match ip address prefix-list ccie2
    set tag 20
route-map ccie permit 30
    match ip address prefix-list ccie3
    set tag 30
route-map ccie permit 40
set tag 40
```

A. 10
B. 20
C. 11
D. 40

Answer: A

QUESTION 623
Which three types of Layer 2 isolation do private VLANs provide? (Choose three)

A. Community
B. Isolated
C. Blocking
D. Promiscuous
E. Private group

Answer: ABD

QUESTION 624
What are three core Features of GET VPN? (Choose three.)

A. The rekey mechanism.
B. Time-based anti-replay
C. AES
D. MPLS
E. Partial mesh
F. Cooperative keys

Answer: ABF

QUESTION 625
Refer to the exhibit. If R1 and R2 are on the same network, what is the effect on the network when you apply the given configuration to R 1 and R2?

```
R1
interface FastEthernet0/0
    ip address 192.168.12.1 255.255.255.0
interface FastEthernet0/1
    ip address 192.168.21.1 255.255.255.0
router eigrp 100
    network 192.168.12.0
    network 192.168.21.0
    metric weights 0 2 0 1 0 0

R2
interface FastEthernet0/0
    ip address 192.168.12.2 255.255.255.0
interface FastEthernet0/1
    ip address 192.168.21.2 255.255.255.0
router eigrp 100
    network 192.168.12.0
    network 192.168.21.0
    metric weights 0 1 0 2 0 0
```

A.   A symmetric routing occurs because the bandwidth and delay K value settings are mismatched.
B.   The interface bandv.4dlh and delay settings adjust automatically to match the new metric settings.
C.   The neighbor adjacency between R1 and R2temporarily resets and then reestablishes itself.
D.   R1 and R2 fail to form a neighbor adjacency.

Answer: D

QUESTION 626
Which 1Pv4 mitigation method allows 1Pv4-only devices to communicate with 1Pv6-only devices?

A.   GRE tunnel
B.   Dual stack
C.   ISA TAP tunnel
D.   NAT64

Answer: D

QUESTION 627
Which three components are in a MPLS header?

A.   A 4-bit experimental use field
B.   An 8-bit TTL
C.   A 4-bit label stack entry
D.   A 2-bit bottom of stack
E.   A 3-bit experimental use field
F.   A 20-bit label

Answer: BEF

QUESTION 628
Which two statements about route distribution are true? (Choose two.)

A.   Redistributing the entire BGP table from the Internet works well when using multiple OSPF areas.
B.   IS-IS does not no support Layer 2 routes that leak into a Layer 1 domain.
C.   Mutual redistribution at multiple points can create a routing loop.
D.   IBGP is used within the AS to Carry EBG P attributes that otherwise would be lost if EBG P was redistributed into IGP.
E.   The unequal cost multipath load-balancing characteristic is lost when redistributing OSPF into EIGRP.

Answer: CD

QUESTION 629
Which type of ACL can be applied only to Layer 2 ports?

A.   Reflexive ACLs
B.   VLAN ACLs
C.   Standard ACLs
D.   PortACLs
E.   Dynamic ACLs

Answer: D

QUESTION 630
Which action does route poisoning take that serves as a loop-prevention method?

A.   It prohibits a router from advertising back onto the interface from which it was learned.
B.   It advertises a route with an unreachable metric back onto the interface from which it was learned.
C.   It immediately sends routing updates with unreachable metric to all devices.
D.   It poisons the route by tagging it uniquely within the network.

Answer: C

QUESTION 631
Which two values are required to implement an EIGRP named configuration? (Choose two.)

A.   Process-id

B. Router-id
C. Subnet-mask
D. Add ress-family
E. Virtual-instance-name

Answer: DE

QUESTION 632
Which option describes how a VTPv3 device responds when it detects a VTPv2 device on a trunk port?

A. It sends VTPv2 packets only
B. It sends a Special packet that contains VTPv3 and VTPv2 packets information.
C. It sends VTPv3 packets only.
D. It sends VTPv3 and VTPv2 packets.

Answer: D

QUESTION 633
Which technology uses MPLS to provide 1Pv6 connectivity o customers in the core network without the need for dual stack?

A. 6to4
B. NAT64
C. NAT
D. SPE

Answer: D

QUESTION 634
Which three statements about bridge assurance are true?

A. Bridge assurance can be enabled on one end of a link or on the both ends.
B. If a bridge assurance ports failed to receive a BPDU after a timeout, the port is put into an error disabled state.
C. If a bridge assurance ports failed to receive a BPDU after a timeout, the port is put into a blocking state.
D. Bridge assurance is enabled on STP multipoint links only.
E. Bridge assurance must be enabled on both the ends of a link.
F. Bridge assurance is enabled on STP point-to-point links only.

Answer: CEF

QUESTION 635
What is the function of the rendezvous point in PIM?

A. It redistributes the multicast configuration to its connected neighbor.
B. It will redistribute the unicast routes to avoid an RPF failure.
C. It is the main source of the multicast traffi

D. It acts as a shared root for a multicast tree.

Answer: D

QUESTION 636
Refer to the exhibit. Which traffic gets set to AF41 by marking policy on interface GigabitEthernet0/0?


```
interface GigabitEthernet0/0
 description *** Site Backbone ***
 ip address 10.1.114.5 255.255.255.248
 service-policy input marking
!
policy-map marking
 class in-voice
 class in-streaming
   set ip dscp af41
  class in-time-sensitive
   set ip dscp af31
class class-default
   set ip dscp af21
!
class-map match-any in-streaming
  match access-group name streaming
  match access-group name tp-rooms
class-map match-any in-voice
  match access-group name voice
class-map match-any in-time-sensitive
  match access-group name time-sensitive
```

A. Any traffic matching access-list-tp-rooms and access-list stream in G.
B. No Traffic gets set to AF41.
C. Only traffic matching access-list tp-rooms.
D. Only traffic matching access-list streaming.

Answer: A

QUESTION 637
Which three actions are required when configuring NAT-PAT? (Choose three)

A. Specify an 1Pv4-to-1Pv6 translation.
B. Enable NAT-PT globally.
C. Specify a: :/96 prefix that will map to an IP4 address.
D. Specify a: :/48 prefix that will map to a MAC address.
E. Specify a ::/32 prefix that will map to an 1Pv6 address.
F. Specify an 1Pv6-to-1Pv4 translation.

Answer: ACF

QUESTION 638
Which two statements about HDLC operations in asynchronous balanced mode are true?
(Choose two.)
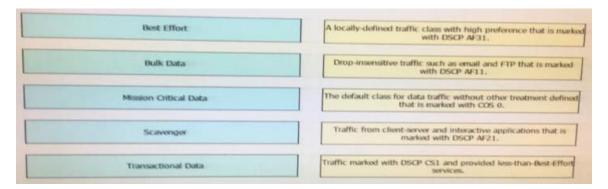
A. Either device can send frames at any time.
B. Each device must negotiate with its neighbor before sending frames.
C. Each device must negotiate with its neighbor to recover from framing errors.
D. Either device can initiate transmission of frames.
E. The initiating device sends a DTE frame.

Answer: CD
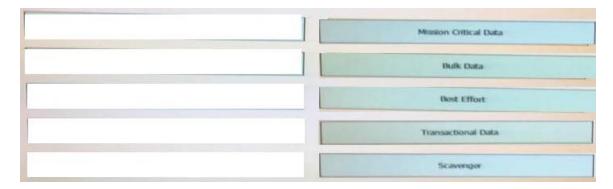
QUESTION 639
Drag and Drop Question
Drag each QoS application-traffic on the left to the matching definition on the right.

Answer:

QUESTION 640
Which prefix List Matches and permits all RFC 1918 network 1 0.0.0.0 routes that have subnet
marks of/16 trough/24?

A. ip prefix-list foo seq 10 perm it 10.0.0.0/16 le 24.
B. Ip prefix-list foo seq 10 permit 10.0.0.0/16 ge 15 le 25.
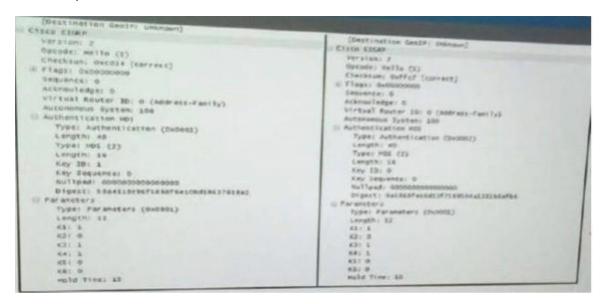
C. lp prefix-list foo seq 10 perm it 1 0.0.0.0/8 ge 15 le 25.
D. lp prefix-listfoo seq 10 permit 10.0.0.0/8 ge 161e 25.

Answer: D

QUESTION 641
Refer to the Exhibit. What is the reason that the two devices failed to form an EIGRP neighbor relationship?
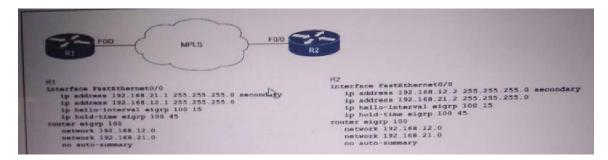
A. The K-values are valid.
B. The two devices have different key IDs.
C. The hold timers are mismatched.
D. The advanced MD5 digest do not match between the devices.

Answer: B

QUESTION 642
Refer to the exhibit. If R1 and R2 cannot establish an EIGRP neighbor adjacency, which reason for the problem is most likely true?

A. The auto-summary command under the route process is disabled
B. The hello-interval and hold-time values are invalid
C. The MTU value between R1 and R2 is too small

D. The primary networks are on different subnets

Answer: D

QUESTION 643
External EIGRP route exchange on routers R1 and R2 was failing because the routers had duplicate router IDs. You changed the eigrp router-id command on R1, but the problem persists. With additional action must you take to enable the routers to exchange routes?

A. Change the corresponding loopback address.
B. Change the router ID on R2.
C. Reset the EIGRP neighbor relationship.
D. Clear the EIGRP process.

Answer: D

QUESTION 644
Refer to the exhibit. Between which router is an LOP session established?

A. R1,R2and R3
B. R1 and R3
C. R1 andR2
D. R2andR3
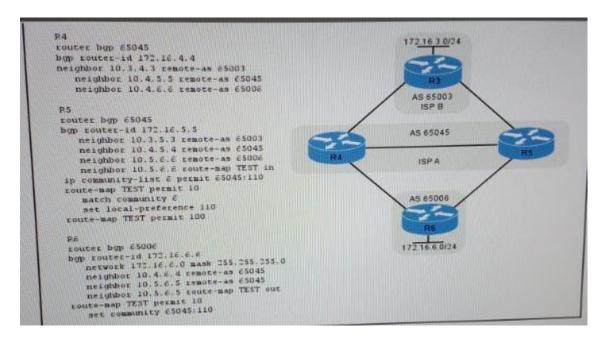
Answer: C

QUESTION 645
Refer to the exhibit. How can you configure R6 so that traffic returns to subnet 172.16.6.0/24 via RS?

A. Advertise prefix 172.16.6.0/24 to neighbor R5 with AS 65006 prepended.
B. Configure the neighbor 10.5.6.5 send-community standard command.
C. Advertise prefix 172.16.6.0/24 to neighbor R5 with metric 80.
D. Set local preference for all prefixes received from neighbor R5 to 200.

Answer: B

QUESTION 646
Which two statements about VTPv3 are true?(Choose two)

A. VTPv3 accepts configuration information only from VTPv2 devices.
B. VTPv3 must receive VTPv2 packets before it can send VTPv2 packets.
C. VTPv3 sends VTPv2 packets when they are detected on a trunk port.
D. VTPv3 regions can communicate in server mode only over a VTPv2 region.
E. Extended VLANs prevent VTPv3 switches from becoming VTPv2

Answer: BE

QUESTION 647
When you implement CoPP on your network, what is its default action?

A. Drop management ingress traffic to the control plane.
B. Monitor ingress and egress traffic to the control plane by using access groups that are applied to the interface
C. Block all traffi
D. Rate-limit bidirectional traffic to the control plane.
E. Permit all traffi

Answer: E

QUESTION 648
Which BGP attribute is used to influence inbound traffic?

A. Multi-exit discriminator
B. Local preference
C. Origin
D. Weight

Answer: A

QUESTION 649
Which option describes the effect of the command ip route vrf DMZ 192.168.0.0.255.255.0.0
172.16.5.5 global?

A. It creates a s1atic default route in the "lh1 DMZ, and the next hop is in the global routing table.
B. It creates a static route in the VRF DMZ for 192.168.0.0 255.255.0.0, and the next hop is in the
   global routing table.
C. It creates a static route in the global routing table for 192.168.0.0 255.255.0.0, and the next hop is
   in the global routing table.
D. It creates a s1atic route in the global routing for 192.168.0.0 255.255.0.0, and the next hop is in
   The VRF DMZ.
E. It creates a static route in the VRF DMZ for 192.168.0.0 255.255.0.0, and the next hop is in the
   VRFDMZ.

Answer: B

QUESTION 650
Which three statements about IS-IS are true? (Choose three.)

A. IS-IS is a cisco proprietary routing protocols.
B. IS-IS has the capability to provide address summarization between areas.
C. IS-IS is an IETF standard.
D. IS-IS has three different levels of authentication: interface level, process level, and domain level.
E. IS-IS can be used to route both IP and CLNP.
F. IS-IS can be used only in the service provider network.

Answer: BDE

QUESTION 651
Which two options are parts of an EEM policy? (Choose two.)

A. event register
B. body
C. environment must defines
D. namespace import
E. entry status
F. exit status

Answer: AB

QUESTION 652
How many address families can a single OSPFv3 instance support?
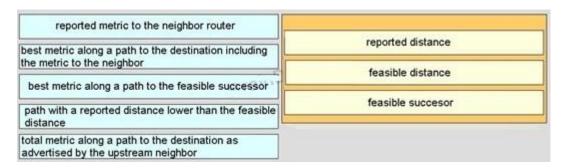
A. 1
B. 2
C. 5
D. 10

Answer: A
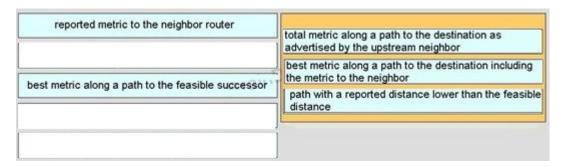
QUESTION 653
Drag and Drop Question
Drag and drop the description on the left to the correct EIGRP term in the right. Not all options are used.

reported metric to the neighbor router		reported distance
best metric along a path to the destination including the metric to the neighbor		feasible distance
best metric along a path to the feasible successor		feasible succesor
path with a reported distance lower than the feasible distance		
total metric along a path to the destination as advertised by the upstream neighbor		

Answer:

reported metric to the neighbor router		total metric along a path to the destination as advertised by the upstream neighbor
		best metric along a path to the destination including the metric to the neighbor
best metric along a path to the feasible successor		path with a reported distance lower than the feasible distance

QUESTION 654
In which way does the Bridge Assurance mechanism modify the default spanning-tree behavior in an effort to prevent bridging loops?

A. IF BPDUs are no longer received on a port, the switch immediately sends a out a TCN BPDU.
B. Extended topology information is encoded into all BPDUs.
C. BPDUs are sent bidirectional on all active networks ports, including blocked and alternate ports.
D. Received BPDUs are looped back toward the sender to ensure that link is bidirectional.

Answer: C

QUESTION 655

Which two statements about scheduling multiple IP SLA operations are true?

A. You must configure IP SLA operations before you can schedule a group of operations.
B. The ip sla monitor group schedule command must be configured on the device.
C. You must configure the frequency of each IP SLA operation before it can start.
D. The IP SLA operations must be scheduled at a maximum interval of 30 seconds.
E. Every IP SLA operation in a single group must start at the same time.

Answer: AC

QUESTION 656
In an MPLS-VPN environment, what is the effect of configuration an identical set of route targets for a particular VRF but then configuration a nonidentical RD across multiple PE devices?

A. The routes are not sent to any remote PE with different RD.
B. The routes are directly managed by the control plane, but there are instances where routes take up twice as much memory.
C. The routes are rejected by the remote PE because they have a different RD than its routes.
D. The routes propagate to the remote PE, but the PE never installs the, in its forwarding table.

Answer: B

QUESTION 657
Which two statements about IGMP filters that are operating in access mode are true? (Choose two)

A. A filter that is applied on the SVI must use the same setting as a same filter that is applied to the trunk port.
B. They can be applied to the access point only.
C. The port filter is always checked first.
D. The SVI filter is always checked first.
E. They can be applied on both the SVI and the access port.

Answer: CE

QUESTION 658
Which LSA type is associated with the default route in a totally stubby area?

A. interarea-prefix LSA for ABRs (Type 3)
B. autonomous system external LSA (Type 5)
C. router LSA (Type 1)
D. interarea-router LSAs for ASBRs (Type 4)

Answer: A

QUESTION 659
How is the MRU for a multilink bundle determined?

A. It is negotiated by LCP.

B. It is manually configured on the multilink bundle.
C. It is manually configured on all physical interfaces of a multilink bundle.
D. It is negotiated by NCP.
E. It is negotiated by IPCP.

Answer: A

QUESTION 660
Which two statements about PIM-DM are true? (Choose two.)

A. It forwards multicast packets on a source tree.
B. It requires an RP.
C. It forwards multicast packets on a shared distribution tree.
D. It floods multicast packets to neighbors that have requested the data.
E. It floods multicast packets throughout the network.
F. It forwards multicast packets to neighbors that have requested the data.

Answer: AE

QUESTION 661
What command can you enter to configure NBAR to recognize VNC traffic?

A. Ipnbar custom-map VNC tcp-udp 5900 5901
B. Ipnbar application-map VNC udp 5900 5901
C. Ipnbar port-to-application seq 5 VNC tcp 5900 5901
D. Ipnbar port-map VNC hex 0xAA 0x1B
E. Ipnbar port-map VNC tcp 5900 5901

Answer: E

QUESTION 662
Which two statements about 6to4 tunnels are true? (Choose two.)

A. They support point-to-point multipoint traffic.
B. They encapsulate IPv6 packets, which allow the packets to travel over Ipv4 infrastructure.
C. They support point-to-point traffic.
D. The support OSPF and EIGRP traffic.
E. They generate an IPv6 prefix using a common IPv4 address.
F. They allow IPv4 packets to travel over Ipv6 infrastructure without modification.

Answer: AB

QUESTION 663
Which two factors contribute to traffic starvation when TCP and UDO flows are included in a single traffic class? (Choose two)

A. TCP flows continually lower their transmission rates when congestion occurs in a link.
B. UDP flows continually reduce the window size when congestion occurs on a link.

C. TCP flows maintain a consistent transmission rate when congestion occurs on a link.
D. TCP flows continually reduce the window size when congestion occurs on a link.
E. UDP flows maintain a consistent transmission rate when congestion occurs on a link
F. UDP flows continually lower their transmission rates when congestion is detected.

Answer: AE

QUESTION 664
In which 802.1D port state are the root bridge, the root port, and the designated port(s) elected?

A. Listening
B. learning
C. forwarding
D. blocking
E. disabled

Answer: A

QUESTION 665
Which two conditions must be met by default to implement the BGP path feature? (Choose two)

A. MPLS must be enabled.
B. The next-hop routers must be different.
C. All attributes must have the same values.
D. Route reflectors must be enabled.
E. The next-hop routers must be the same.

Answer: BC

QUESTION 666
Which three fields are part of a TCN BPDU? (Choose three.)

A. protocol ID
B. version
C. type
D. max-age
E. flags
F. message age

Answer: ABC

QUESTION 667
Which type of packet is sent by an HSRP router to advertise the virtual IP address?

A. Gratuitous ARP
B. ARP Request
C. HSRP Hello
D. HSRP Coup

Answer: A

QUESTION 668
Which two statements about QoS marking are true? (Choose two.)
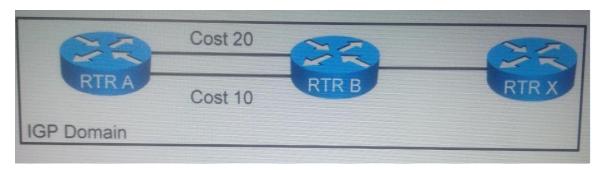
A. It is supported on Fast EtherChannel and ATM SVC interfaces.
B. It is supported on tunnel interfaces.
C. It can use3 a table map to mark traffic.
D. The set discard-class command can be configured for ATM and MPLS protocols.
E. It requires Cisco Express Forwarding to be enabled on the sending interface and the receiving interface.

Answer: BE

QUESTION 669
Refer to the exhibit. Router A must reach router X. Which option describes how router A decides which interface to use to forward packets ?

A. Router A relies on RIB to select the desired interface
B. Router A does per-flow load-balance across the two interfaces
C. Router A relies on FIB to select the desired interface
D. Router A does per-packet load-balance across the two interfaces

Answer: A

QUESTION 670
Which three options are there of the valid message types for DHCPv6? (Choose three.)

A. Request
B. Solicit
C. Discover
D. Advertise
E. Offer
F. Leave

Answer: ABD

QUESTION 671
Which two statements about GLBP are true? (Choose two.)

A. It uses Hello, Request and Reply packet reply.
B. Each GLBP group supports up to 4 MAC address.
C. It support stateful switchover.
D. It communities to multicast address 244.0.0.18.
E. It allows members to elect up to two gateways as the AVG.

Answer: BC

QUESTION 672
An NASSA area has two ABRs connected to Area 0.
Which statement is true?

A. Both ABRs translate Type-7 LSAs to Type-5 LSAs.
B. The ABR with the highest router ID translates Type-7 LSAs to Type-5 LSAs.
C. No LSAs translation is needed.
D. Both ABRs forward Type-5 LSAs from the NASA area to backbone area.

Answer: B

QUESTION 673
You need to modify the IOS L3switch configuration for High Availability operation.
What additional configuration is needed, if any?

A. Modify the configuration to use VRRP, which has additional functionally that works better for High Availability.
B. Enable HSRP preempt with a delay to allow time for he routing and switching protocols to converge.
C. Enable HSRP preempt to force the primary L3 switch to resume th master role after a failure.
D. The shown configuration is sufficient for High functionally.

Answer: B

QUESTION 674
Which two statements about Cisco IOS XE are true? (Choose two)

A. It is deployed in a Linux-based environment
B. Separate images are required for platform-dependent code
C. It uses a service blade outside Cisco IOS XE to integrate and run applications
D. The FED feature provides separation between the control plane and the data plane
E. Its functions run as multiple separate processes in the OS

Answer: AE

QUESTION 675
Which topology allows the split-horizon rule to be safely disabled when using EIGRP?

A. Hub and spoke
B. Ring
C. Full mesh
D. Partial mesh

Answer: A

QUESTION 676
Refer to the exhibit. Which statement is true?

```
Router#sh ip ospf 1
  Routing Process "ospf 1" with ID 1.0.0.102
  Start time: 00:00:09.225, Time elapsed: 00:02:54.859
  Supports only single TOS(TOS0) routes
  Supports opaque LSA
  Supports Link-local Signaling (LLS)
  Supports area transit capability
  Supports NSSA (compatible with RFC 3101)
  Event-log enabled, Maximum number of events: 1000, Mode: cyclic
  It is an area border and autonomous system boundary router
  Redistributing External Routes from,
      connected, includes subnets in redistribution
  Router is not originating router-LSAs with maximum metric
  Initial SPF schedule delay 100 msecs
  Minimum hold time between two consecutive SPFs 200 msecs
  Maximum wait time between two consecutive SPFs 10000 msecs
  Incremental-SPF disabled
  Initial LSA throttle delay 50 msecs
  Minimum hold time for LSA throttle 100 msecs
  Maximum wait time for LSA throttle 5000 msecs
  Minimum LSA arrival 80 msecs
  LSA group pacing timer 240 secs
  Interface flood pacing timer 33 msecs
  Retransmission pacing timer 66 msecs
  Number of external LSA 0. Checksum Sum 0x000000
  Number of opaque AS LSA 0. Checksum Sum 0x000000
  Number of DCbitless external and opaque AS LSA 0
  Number of DoNotAge external and opaque AS LSA 0
  Number of areas in this router is 2. 2 normal 0 stub 0 nssa
  Number of areas transit capable is 0
  External flood list length 0
  IETF NSF helper support enabled
  Cisco NSF helper support enabled
  BFD is enabled
  Reference bandwidth unit is 100 mbps
```

A. BFD and SPF throttling are configured
B. Only BFD is enabled
C. BFD, SPF, and LSA timers are turned for faster convergence
D. Fast convergence is not configured

Answer: C

QUESTION 677
Which two loops-prevention mechanisms are implemented in BGP? (Choose two)

A. The command bgp bestpath as-path-ignore enables the strict checking of AS_PATH so that they drop routes with their own AS in the AS_PATH.
B. A route with its own cluster ID in the CKUSTER_LIST is dropped automatically when the route reenters its own AS.
C. The command bgpbestpath med missing-as-worst assigns the smallest possible MED, which directly prevents a loop.
D. The command bgpallowa-in enables a route with its own AS_PATH to be dropped when it reenters its own AS
E. A route with its own AS in the AS_PATH is dropped automatically if the routereenters its own AS.

Answer: BE

QUESTION 678
Which two conditions can cause unicast flooding? (Choose two)

A. RIB table overflow
B. Forwarding table overflow
C. Symmetric routing
D. Multiple MAC addresses in the Layer 2 forwarding table
E. Recurring TCNs

Answer: BE

QUESTION 679
Which three components are in an MPLS header? (Choose three)

A. 4-bit experimental use field
B. 4-bit label stack entry
C. an 8-bit TTL
D. 2-bottom of stack
E. 3-bit experimental use field
F. 20-bit label

Answer: CEF

QUESTION 680
Refer to the exhibit. After observing that an OSPF neighbor relationship failed to form, you executed a debug that returned the given output. Which configuration issue prevented the OSPF neighbor relationship from forming?

A. The stub flag is set on the neighboring device.
B. The devices are on different subnets.
C. The hello and hold timers are mismatched.
D. The area IDs are mismatched.

Answer: B

QUESTION 681
What is the initial BFD state?

A. Init
B. Down
C. Admin/Down
D. Up

Answer: C

QUESTION 682
Which two configuration options are available for PIM snooping? (Choose two.)

A. On a specific interface on the device.
B. On a range of interfaces on the device.
C. Under the VLAN in VLAN configuration mode.
D. Globally on the device.
E. Under the SVI for the corresponding VLAN.

Answer: DE

QUESTION 683
Which two statements about the passive-interface command issued under EIGRP are true?
(Choose two)

A. It configures the interface to use unicast messages to establish EIGRP neighbor relationships
B. It disables processing of incoming hello messages
C. It allows incoming routing updates to be received but disables outing routing updates
D. If it is enabled globally under EIGRP on the device, it can be disabled for individual interfaces to allow those interfaces to remain active

E. It configures the device to advertise only connected interfaces to neighbors with EIGRP

Answer: BD

QUESTION 684
Which two options are requirements for Control-Plane Policing? (Choose two.)

A. Cisco Express Forwarding must be enabled globally.
B. Cisco Discovery Protocol must be disabled in the control plane.
C. A crypto policy must be installed.
D. A loopback address must be configured for device access.
E. A class map must be configured to identify traffic.

Answer: AE

QUESTION 685
Which two elements are required to define a class-map? (Choose two.)

A. A traffic-class name
B. A series of match commands.
C. A traffic policy name
D. A series of set command
E. A command such as bandwidth, fair-queue, or random-detect to enable a QoS option.
F. An attachment to an interface

Answer: AB

QUESTION 686
Which technology can be used to secure the core of an STP domain?

A. UplinkFast
B. BPDU guard
C. BPDU filter
D. root guard

Answer: D

QUESTION 687
Which two statements about DHCP operations are true? (Choose two)
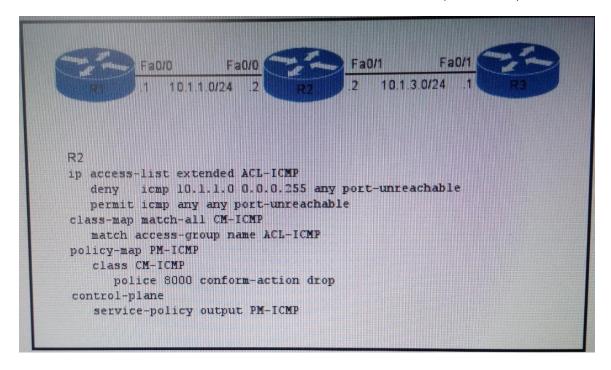
A. When the DHCP relay agent receives a DHCP messages, If generates a new DHCP message to transmit
B. The client uses option 125 in a DHCPDISCOVER message to discover the DHCP server
C. The DHCP server inserts option 150 when it sends a DHCPOFFER message
D. The client uses TTL to discover a DHCP server and obtain a leased IP address
E. The DHCP relay agent can insert option 82 with additional information about the client identity

Answer: BE

QUESTION 688
Refer to the exhibit. Which two statements about this network are true? (Choose two)


```
R2
ip access-list extended ACL-ICMP
    deny   icmp 10.1.1.0 0.0.0.255 any port-unreachable
    permit icmp any any port-unreachable
class-map match-all CM-ICMP
    match access-group name ACL-ICMP
policy-map PM-ICMP
    class CM-ICMP
        police 8000 conform-action drop
control-plane
    service-policy output PM-ICMP
```

A. It allows successful traceroute operations from R3 to R2
B. It allows successful traceroute operation from R1 to R2
C. It generates syslog messages for all discarded packet
D. It is configured with control-plane policing in silent mode
E. It is configured as distributed control-plane services

Answer: BD

QUESTION 689
In an MPLS-VPN environment, what is the effect of configuring an identical set of route targets for a particular VRF but then configuring nonidentical RD across multiple PE devices?

A. The routes are rejected by remote PE because they have a different RD than its routes.
B. The routes propagate to the remote PE, but the PE never installs them in its forwarding table.
C. The routes are correctly managed by the control plane, but there are instances where routes take up twice as much memory.
D. The routes are not sent to any remote PE with a different RD.

Answer: C

QUESTION 690
Which two are features of DMVPN? (Choose two)

A. It supports multicast traffic
B. It does not supports spoke routers behind dynamic NAT

C. It only supports remote peers with statically assigned addresses
D. It offers configuration reduction
E. It requires IPsec encryption

Answer: AD

QUESTION 691
What are the two EEM event subscribers? (Choose two)

A. applet
B. script
C. syslog
D. CLI
E. none

Answer: AB

QUESTION 692
For which feature is the address family "rtfilter" used?

A. Enhanced Route Refresh
B. MPLS VPN filtering
C. Route Target Constraint
D. Unified MPLS

Answer: C

QUESTION 693
What is a major difference between Unidirectional Link Detection (UDLD) and Bidirectional
Forwarding Detection (BFD)?

A. UDLD operates at Layer 3 and detects the failure of the Layer 3 connectivity between two routers.
BFD operates at Layer 3 and detects forwarding path failures over multiple Layer 2 hops between
two routers.
B. UDLD operates at Layer 2 and detects failure of physical links. BFD operates at Layer 3 and
detects failure of forwarding paths, which may transit multiple Layer2 hops, between two routers.
C. UDLD operates at Layer 2 and detects failure of physical links BFD operates at Layer 2 and
detects failure of a direct link between two routers or switches.
D. UDLD operates at Layer 3 and detects failure of physical links between adjacent routers. BFD
operates at Layer 3 and detects failure of a forwarding path, which may transit multiple Layer 2
hops , between two routers.

Answer: B

QUESTION 694
Which two events occur when a packets is decapsulated in a GRE tunnel? (Choose two.)

A. The source IPv4 address in the IPv4 payload is used to forward the packet.
B. The destination IPv4 address in the IPv4 payload is used to forward of the packets.

C. The version field of the GRE header is incremented.
D. The GRE keepalive mechanism is reset.
E. The TTL of the payload packet is incremented.
F. The TTL of the payload is discremented.

Answer: BE

QUESTION 695
Which three actions are required when configuration NAT-PT? (Choose three)

A. Specify a ::/48 prefix that will map to a MAC address.
B. Specify a::/32 prefix that will map to an IPV6 address.
C. Specify an IPv6-to-IPv4 translation.
D. Enable NAT-PT Globally.
E. Specify a ::/96 prefix that will map to an IPv4 address.
F. Specify an IPv4-to-IPv6 translation.

Answer: CEF

QUESTION 696
Refer to the exhibit. When a user attempted to log in to R1 via the console, the logon was successful but the user was placed in user EXEC mode instead of privileged EXEC mode. What action can you take to correct the problem?


```
R1
aaa new-model
aaa authentication login default local
username jdoe password 0 cisco
```
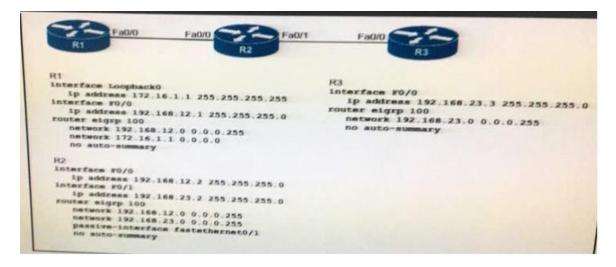
A. Configure the privilege level 15 command under line console 0
B. Configure the username jdoe privilege 15 password 0 cisco command under the global configuration
C. Configure the aaa authentication login default local enable command under the global configuration
D. Configure the enable secret level 15 cisco command under the global configuration
E. Configure the aaa authentication console command under the global configuration

Answer: A

QUESTION 697
Refer the exhibit. What are two effects of the given network configuration? (Choose two)

A. The 192.168.12.0/24 network is added to the R3 database.
B. R1 and R2 fail to form an adjacency.
C. R2 and R3 fail to form an adjacency.
D. R2 advertises the 192.168.23.0/24 network.
E. R2 advertise the 198.168.23.0/24 network.
F. The 192.168.12.0/24 network to the R3 route table.

Answer: CD

QUESTION 698
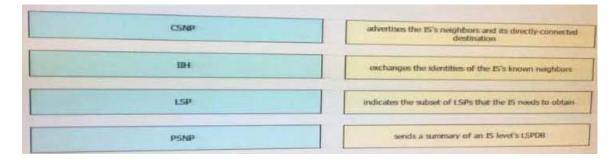Which two statements are true about IS-IS? (Choose two.)

A. IS-IS DIS election is nondeterministic.
B. IS-IS SPF calculation is performed in three phases.
C. IS-IS works over the data link layer, which does not provide for fragmentation and reassembly.
D. IS-IS can never be routed beyond the immediate next hop.

Answer: CD

QUESTION 699
Drag and Drop Question
Drag and drop each IS-IS PDU type from the left onto its purpose on the right.
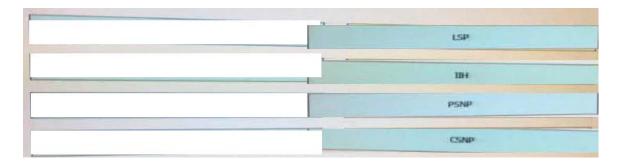
Answer:

The image shows boxes labeled LSP, IIH, PSNP, CSNP.

QUESTION 700
Drag and Drop Question
Drag and drop the PPPoE packet type on the left of the corresponding description on the right.

Drag and drop the PPPoE packet type on the left to the corresponding description on the right.

PADR	A packet that is sent with the destination_addr set to the broadcast address. The packet indicates the type of service requested.
PADT	A packet that is sent with the destination_addr set to the unicast address of the PPPoE client. The packet contains an offer for the client.
PADO	A packet that is sent from the PPPoE client with the destination_addr set to the chosen access concentrator. The packet contains a session request from the client.
PADI	A packet that is sent as confirmation to the client. The packet contains the unique PPPoE session ID.
PADS	A packet that is sent to terminate the PPPoE session.

Answer:

Drag and drop the PPPoE packet type on the left to the corresponding description on the right.

	PADI
	PADO
	PADR
	PADS
	PADT

QUESTION 701
Refer to the exhibit. What is the maximum size of a packet that can be sent successfully from R3 to 10.1.2.1 without enabling fragmentation?

A. 1490 bytes
B. 1501 bytes
C. 1480 bytes
D. 1479 bytes
E. 1500 bytes
F. 1521 bytes

Answer: C

QUESTION 702
How are the Cisco Express Forwarding table and the FIB related to each other?

A. Cisco Express forwarding uses a FIB to make IP destination prefix-based switching decisions
B. Cisco Express Forwarding table allows route lookups to be forwarded to the route processor for processing before they are sent to the FIB
C. The FIB is used to populate the Cisco Express Forwarding table
D. There can be only one FIB but multiple Cisco Express forwarding tables on IOS devices

Answer: A

QUESTION 703
Which two statements about BGP PIC are true? (Choose two.)

A. When the path to a distant PE router charges, PIC is Independent of the number VRFs on the router.
B. It is prefix-dependent for internal routes.
C. PIC Core supports fast convergence with external neighbor links.
D. It achieves subsecond convergence in the BGP FIB.
E. PIC Edge provides fast convergence when an external neighbor node fails.

Answer: CD

QUESTION 704
Refer to the exhibit. Which statement is true?

```
R1#show mpls l2transport vc 100 detail
Local interface: Fa2/6 up, line protocol up, Ethernet up
   Destination address: 2.2.2.3, VC ID: 100, VC status: up
      Preferred path: Tunnel1,  active
      Default path: ready
      Tunnel label: 12307, next hop point2point
      Output interface: Tu1, imposed label stack {12307 20}
   Create time: 00:00:11, last status change time: 00:00:11
   Signaling protocol: LDP, peer 2.2.2.3:0 up
      MPLS VC labels: local 21, remote 20
      Group ID: local 0, remote 2
      MTU: local 1500, remote 1500
      Remote interface description:
   Sequencing: receive disabled, send disabled
   VC statistics:
      packet totals: receive 1, send 6
      byte totals:   receive 368, send 0
      packet drops:  receive 0, send 0
```

A. R1 is using an MPLS TE tunnel for this pseudowire, because the IP path is not avialable.
B. The default route 0.0.0.0/0 is available in the IPv4 routing table.
C. R1 has preferred-path configured for the pseudowire.
D. R1 routes this pseudowire over MPLS TE tunnel1 with transport label 20

Answer: C

QUESTION 705
When you implement CoPP on your network, what is its default action?

A. Drop management ingress traffic to the control plane.
B. Monitor ingress and egress traffic to the control plane by using access groups that are applied to the interface
C. Block all traffic.
D. Rate-limit bidirectional traffic to the control plane.
E. Permit all traffic.

Answer: E

QUESTION 706
Which interior gateway protocol is based on open standards, uses a shortest-path first algorithm, provides native support for non-IP Layer 3 protocols, and operates at the data link layer?

A. EIGRP
B. IS-IS
C. OSPF
D. BGP

Answer: B

QUESTION 707
Refer to the exhibit. Between which router is an LDP session established?

A. R1, R2 and R3
B. R1 and R3
C. R1 and R2
D. R2 and R3

Answer: C

QUESTION 708
Which IS-IS process is responsible for flooding local link information to adjacent routers?

A. update
B. receive
C. decision
D. forward

Answer: A

QUESTION 709
In which way does the Bridge Assurance mechanism modify the default spanning-tree behavior in an effort to prevent bridging loops?

A. If BPDUs are no longer received on a port, the switch immediately sends out a TCN BPDU.
B. Extended topology information is encoded into all BPDUs
C. BPDUs are sent bidirectional on all active network ports, including blocked and alternate ports.
D. Received BPDUs are looped back towards the sender to ensure that the link is bidirectional

Answer: C

QUESTION 710
Which information is contained in an OSPF Type 7 Not-So-Stubby Area NSSA External LSA?

A. External network address, mask, and cost to reach network that is external to the OSPF domain and only within the NSSA
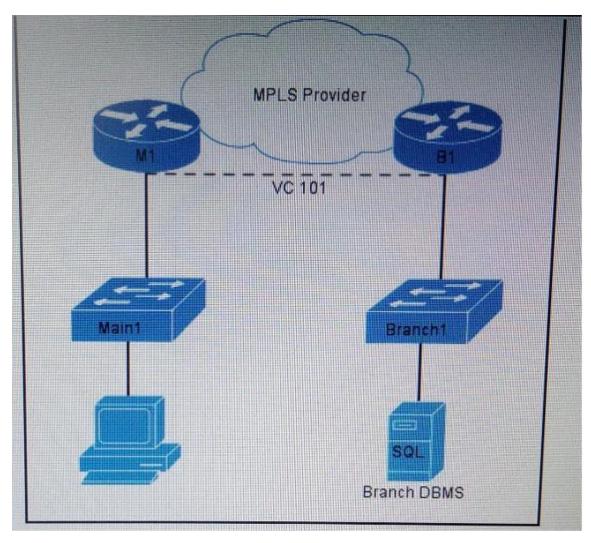B. The external network address, mask and cost to reach networks that are external to the OSPF

NSSA, including the default route.
C. The address of routers that connect the current area to other areas and cost to reach those routers.
D. The paths and costs to reach other stub area border routers in the OSPF routing domain
E. The paths and costs to all OSPF NSSA areas that are external to the current area

Answer: A

QUESTION 711
Refer to the exhibit. The Main1 and Branch1 switches are connected directly over an MPLS pseudowire, and both run UDLD. After router B1 reloads because of a power failure, the pseudowire is restored. However, the Branch 1 switch is unable to reach the Main 1 switch. Which two actions can you take to restore connectivity and prevent the problem from recurring? (Choose two)

A. Issue the shutdown and no shutdown commands on both the Branch1 switch uplink to the B1 router and the Main 1 switch's uplink to the M1 router.
B. Configure a backup GRE tunnel between the Main 1 and Branch 1 switches.
C. Enable UDLD recovery on both the Main 1 and Branch 1 switches

D. Enable errdisable recovery on both the Main 1 and Branch 1 switches.
E. Configure a backup pseudowire between the Main 1 and Branch1 switches

Answer: AD

QUESTION 712
Which statement about Auto-RP is true?

A. An RP that is tied to a loopback address must be configured.
B. All interfaces must be configured in sparse mode.
C. All interfaces must be configured in sparse-dense mode.
D. All interfaces must be configured in dense mode.

Answer: C

QUESTION 713
Which technology can be used to secure the edge of an STP domain?

A. root guard
B. BPDU guard
C. UplinkFast
D. BPDU filter

Answer: A

QUESTION 714
Which three features support object tracking? (Choose three)

A. OSPF
B. BFD
C. EEM
D. HSRP
E. PfR
F. vPC

Answer: CDF

QUESTION 715
Which GDOI key is responsible for encrypting control plane traffic?

A. The traffic encryption key
B. The key-chain
C. The preshared key
D. The key encryption key

Answer: D

QUESTION 716
Which two statements about private VLAN communications are true? (Choose two.)

A. Promiscuous ports communicate with all other ports.
B. Primary VLAN traffic is passed across trunk interfaces.
C. Promiscuous ports connect only to routers.
D. Isolated ports communicate with other isolated ports.

Answer: AB

QUESTION 717
Which three options are three of the valid message types for DHCPv6? (Choose three)

A. Offer
B. Request
C. Leave
D. Solicit
E. Discover
F. Advertise

Answer: BDF

QUESTION 718
Which IPv6 migration method allows IPv4-only devices to communicate with IPv6-only devices?

A. GRE tunnel
B. dual stack
C. ISATAP tunnel
D. NAT64

Answer: D

QUESTION 719
Refer to the exhibit. While troubleshooting an issue with a blocked switch port, you find this error in the switch log. Which action should you take first to locate the problem?


```
SPANTREE-2-LOOPGUARDBLOCK: No BPDUs were received on port FastEthernet 0/1
in VLAN 10. Moved to loop-inconsistent state
```

A. Check the attached switch for a BPDU filter.
B. Test the link for unidirectional failures.
C. Check the attached switch for an interface configuration issue.
D. Execute the show interface command to check FastEthernet 0/1.

Answer: A

QUESTION 720
Which three pieces of information are carried in OSPF type-3 LSAs? (Choose three)

A. Forwarding address
B. IP subnet
C. Subnet mask
D. Authentication type
E. External route tag
F. Metric

Answer: AEF

QUESTION 721
What is one requirement to support the IGMP proxy feature?

A. Devices on the unidirectional link must be in the same IP subnet.
B. Devices connected to a unidirectional link must disable Internet access.
C. IGMP snooping must be disabled.
D. PIM-DM must be enabled on all unidirectional links.

Answer: A

QUESTION 722
Which routing protocol is incompatible with VRF-lite?

A. IS-IS
B. EIGRP
C. BGP
D. OSPF

Answer: A

QUESTION 723
Which two statements about GLBP are true? (Choose two)
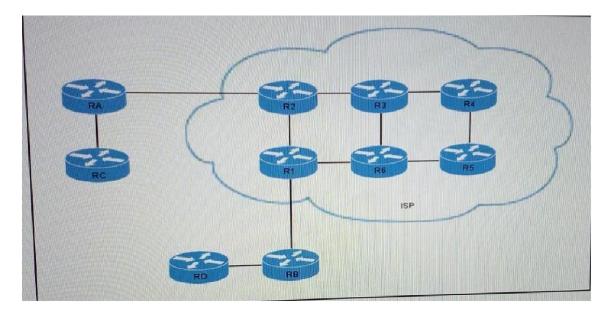
A. It allows members to elect up to gateways as the AVG.
B. It uses Hello, Request, and Reply packet types.
C. Each GLBP group supports up to 4 MAC addresses.
D. It communicates to multicast address 224.0.0.18.
E. It supports stateful switchover.

Answer: CE

QUESTION 724
Refer to the Exhibit. Which two statements about the given MPLS VPN ate true? (Choose two.)

A. It includes four CE routers.
B. Router A and router 1 must be BGP neighbors.
C. It includes four P routers.
D. It includes two CEs and two Pes.
E. Only one connection is outside the ISP network.

Answer: CD

QUESTION 725
Refer to the exhibit. What are two effects of the given configuration?(Choose two)

```
interface Loopback0
        ip address 172.1.1.1 255.255.255.255
        ip pim dense-mode
interface FastEthernet0/0
        ip address 192.168.12.1 255.255.255.0
        ip pim dense-mode
interface FastEthernet0/1
        ip address 192.168.14.1 255.255.255.0
        ip pim dense-mode

ip pim bidir-enableip pim send-rp-announce Loopback0 scope 5 group-list 1 bidir
ip pim send-rp-discovery scope 5

access-list 1 deny   224.1.1.1
access-list 1 permit 239.0.0.0 0.255.255.255
```

A. Source for the 224.1.1.1 multicast stream will register with 172.1.1.1.
B. It configures 172.1.1.1 as a spare-mode rendezvous point.
C. Multicast stream 224.1.1.1 will operate in spare mode.

D. It configures 172.1.1.1 as the Bidir-PIM rendezvous point.
E. Multicast stream 224.1.1.1 will operate in dense mode.
F. Sources for the 239.1.1.1 multicast stream will register with 172.1.1.1.

Answer: DF

QUESTION 726
Refer to the Exhibit. Which two statements about the R1 configuration are true? (Choose two)

A. Timestamp are disabled for log messages.
B. The service timestamps log uptime command is configured.
C. R1 is using the default format for log output.
D. Sequence numbers and timestamps for log output
E. The buffer is set to the default size of 4096 bytes.

Answer: DE

QUESTION 727
Which two statements about QoS classification and marking are true? (Choose two)

A. After classification of a packet, the device can only transmit the packet as is, or discard it
B. It can classify packets based on their source IP and MAC addresses only
C. Through the use of traffic policing, CAR provides rate limiting capabilities
D. CAR is capable of classifying and reclassifying packets as they are processed
E. It can classify packets based on their source and destination IP and MAC addresses only
F. CAR rate policies use CoS, IP precedence, and prefix lists to match traffic

Answer: BF

QUESTION 728
Which statement describes the operation of the Generalized TTL Security Mechanism (GTSM), used by routing protocols to prevent some types of attack?

A. An MD5 hash of the received TTL, source IP, destination IP, protocol , and shared key must match
B. The TTL in a received packet must be a low value (typically 1-2)
C. The TTL in a received packet must be a high value (typically 254-255)
D. Both end systems compute an MD5 hash based on the TTL and a shared secret. If the received and local value differ, the packet is dropped
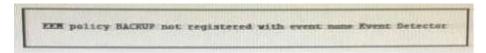
Answer: C

QUESTION 729
What is the mechanism could be used to avoid the problem of TCP Starvation / UDP Dominance?

A. Place UDP traffic in a dedicated traffic-class with the bandwidth keyword configured
B. Use policy routing to send the UDP and TCP traffic over different paths
C. Configure QoS to police UDP traffic to the desired volume
D. WRED to balance TCP and UDP utilization

Answer: D

QUESTION 730
Refer to the exhibit. When it attempted to register the EEM script, the device returned this error message.

Which action can you take to correct the problem?

A. Configure the end command at the end of the BACKUP EEM policy
B. Configure the event none command so that the event can be triggered manually
C. Configure the event action to run the applet
D. Configure the event manager run command to register the event

Answer: C

QUESTION 731
Which three sets of fields that can be included in a NetFlow export template? (Choose three)

A. IGP
B. IPv4 main cache
C. ODR
D. BGP PIC
E. PfR
F. MPLS labels

Answer: BDF

QUESTION 732
Which technology uses MPLS to provide IPv6 connectivity to customers in the core network without the need for dual-stack?

A. 6to4
B. NAT64
C. NAT
D. 6PE

Answer: D

QUESTION 733
Which two statements about MSDP are true? (Choose two)

A. It is supported both for IPV4 and IPV6 multicast deployments
B. It is encapsulated into UDP segments
C. It is encapsulated into PIM packets
D. It interconnects into PIM-SM domains
E. MSDP peers are established using multiprotocol BGP
F. MPLS is required to establish MSDP peering

Answer: DE

QUESTION 734
Which type of QoS is used on the CE device to rate-limit the aggregate traffic towards the WAN Ethernet circuit?

A. CBWFQ
B. WRED
C. LLQ
D. FIFO

Answer: C

QUESTION 735
Which two statements about enhanced object tracking are true?(Choose two)

A. With HSRP, it can track only the line-protocol state.
B. It can track over 200 objects at once.
C. It supports stateful switchover with HSRP
D. It supports stateful switchover with GLBP
E. Tracking objects are identified with unique numbers

Answer: BE

QUESTION 736
On a network using DiffServ, which option refers to the actions that applied to a packet as it moves through the network?

A. DSCP
B. PHB
C. Code-point
D. IP-precedence

Answer: A

QUESTION 737
Which two statements about NetFlow version 9 are true? (Choose two.)

A. It supports up to two exporters per cache
B. It supports both encryption and authentication
C. It supports up to six exporters per cache
D. It supports export over TCP and UDP
E. It supports export over UDP only
F. Each flow monitor supports up to 10 exporters

Answer: DF

QUESTION 738
Which two BGP attributes are optional non-transitive attributes? (Choose two.)

A. Weight
B. MED
C. Local preference
D. Cluster list
E. AS path

Answer: BD

QUESTION 739
When is it useful to disable split horizon on an EIGRP interface?

A. It is never advisable to disable split horizon on an EIGRP interface.
B. Disable it when you want to send routes that are learned from another routing protocol to peers on the same interface.
C. Disable it when you need to send updates to peers on the interface on which the updates were received.
D. Disable it when you want to provide additional backup paths in your network

Answer: C

QUESTION 740
Drag and Drop Question
Drag and drop the OTV component on the left to the function it performs on the right.

edge device	elected by the OTV to provide loop-free multihoming
join interface	connects VLANs to be extended
internal interface	receives local OTV hello messages
overlay interface	provides an uplink to the overlay network
site VLAN	encapsulates layer 2 frames within an IP header
authoritative edge device	connects a site to an overlay network

Answer:

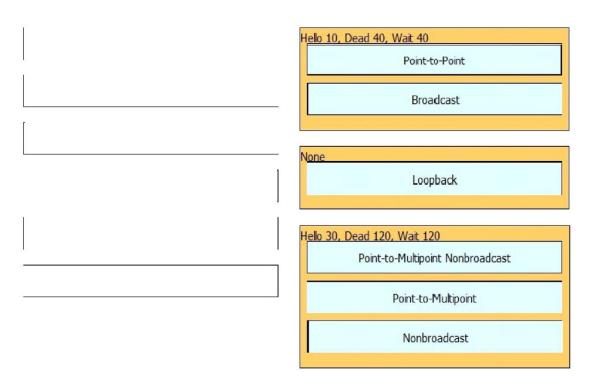| |
|---|
| authoritative edge device |
| internal interface |
| site VLAN |
| join interface |
| overlay interface |
| edge device |

QUESTION 741
Drag and Drop Question
Drag and drop the OSPF network type on the left to the correct category of timers on the right.

	Hello 10, Dead 40, Wait 40
Point-to-Point	1
	2
Loopback	
	None
Point-to-Multipoint Nonbroadcast	1
Broadcast	
	Hello 30, Dead 120, Wait 120
Point-to-Multipoint	1
	2
Nonbroadcast	3

Answer:

	Hello 10, Dead 40, Wait 40
	Point-to-Point
	Broadcast
	None
	Loopback
	Hello 30, Dead 120, Wait 120
	Point-to-Multipoint Nonbroadcast
	Point-to-Multipoint
	Nonbroadcast

QUESTION 742
Drag and Drop Question
Drag each statement about EtherChannel protocols on the left to the matching EtherChannel

---

protocol on the right.

A Cisco Proprietary protocol.	PAgP
	1
Supports 8 ports in a port group, with all active.	
	2
Supports auto and desirable configuration modes.	
	3
Supported by the IEEE 802.3ad protocol.	
	LACP
Supports 16 ports in a port group, with 8 active.	1
Supports active and passive configuration modes.	2
	3

Answer:

A Cisco Proprietary protocol.	PAgP
	A Cisco Proprietary protocol.
Supports 8 ports in a port group, with all active.	
	Supports 8 ports in a port group, with all active.
Supports auto and desirable configuration modes.	
	Supports auto and desirable configuration modes.
Supported by the IEEE 802.3ad protocol.	
	LACP
Supports 16 ports in a port group, with 8 active.	Supported by the IEEE 802.3ad protocol.
Supports active and passive configuration modes.	Supports 16 ports in a port group, with 8 active.
	Supports active and passive configuration modes.

QUESTION 743
Which two statements about logging are true? (Choose two)

A. When you enable sequence numbers, the date timestamp is disabled automatically by default
B. A log message can include both uptime and the date timestamps
C. A log message's facility value indicates the hardware on which the log message was generated

D.   Logs can be displayed on the console or on a remote terminal
E.   Log messages include a mnemonic that describes the message
F.   The mnemonic can refer to a hardware device, a protocol, or a software module

Answer: AE

QUESTION 744
Which two loops-prevention mechanisms are implemented in BGP? (Choose two)

A.   The command bgp bestpath as-path-ignore enables the strict checking of AS_PATH so that they
     drop routes with their own AS in the AS_PATH.
B.   A route with its own cluster ID in the CKUSTER_LIST is dropped automatically when the route
     reenters its own AS.
C.   The command bgpbestpath med missing-as-worst assigns the smallest possible MED, which
     directly prevents a loop.
D.   The command bgpallowa-in enables a route with its own AS_PATH to be dropped when it
     reenters its own AS
E.   A route with its own AS in the AS_PATH is dropped automatically if the routereenters its own AS.

Answer: BE

QUESTION 745
Which two statements about debugging on Cisco routers are true? (Choose two)

A.   Using console logging can reduce the performance impact of the debug command
B.   The debug command can be run in privileged exec mode only
C.   By default, the router logs debug command output to vty lines
D.   The terminal monitor command copies debug output to the terminal
E.   The debug ip packet command can debug IP traffic that is fast-switched on the router
F.   The debug command can be run in user exec mode

Answer: BD

QUESTION 746
Which two statements about QoS and marking are true? (Choose two)

A.   The set-discard-class command can be configured for ATM and MPLS protocols
B.   It can use a table map to mark traffic
C.   It requires Cisco Express forwarding to be enabled on the sending interface and the receiving
     interface
D.   It is supported on tunnel interfaces
E.   It is supported on Fast EthernetChannel and ATM SVC interfaces

Answer: CD

QUESTION 747
Refer to the exhibit. Which statement correctly describes how a router with this configuration
treats packets that matches access-list 144 if it does not know a path to 172.16.12.5, and does
not know a path 192.168.3.2?

```
interface ethernet 0/0
    ip policy route-map PBR
route-map PBR
    match ip address 144
    set ip next-hop 172.16.12.5
    set ip next-hop recursive 192.168.3.2
```

A. It send an ICMP source quench message.
B. It drops the packet immediately.
C. It routes the packet into a loop and drops it when the TTL reaches zero.
D. It routes the packet based on the packet's destination using the routing table.

Answer: D